Author’s response to reviews

Title: Assessing Attitudes Towards Medical Assisted Dying in Canadian Family Medicine Residents: A Cross-Sectional Study

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Version: 1 Date: 02 Nov 2019

Author’s response to reviews

Dear Dr. Jox,

Thank you for the opportunity to address the reviewers’ comments and to revise our manuscript for consideration for publication in BMC Medical Ethics. Below, please find our item-by-item responses to all the reviewers’ comments, which are included verbatim. All page and paragraph numbers refer to locations in the revised, clean version of the manuscript.

Klaus Bally (Reviewer 1) Comments:

Comment 1:
Thank you for the opportunity to review this manuscript. As a general practitioner with palliative care experience and also experience in the field of medical end-of-life practices in Switzerland, I relate to the content. Regarding the statistics, I would like to ask you politely to obtain a statement from a suitably competent specialist.

Response 1:
Thank you for taking the time to review our paper and for your helpful suggestions. We have consulted with our own local statistical specialist to help with our statistics, and would welcome any additional specialist’s input as the editors desire.

Comment 2:
It is an interesting study, based on established surveys, which could be carried out multicentrically and seems therefore reasonably conclusive despite the low response rate. Since the willingness to participate in MAID is in the foreground I would have welcomed if the legal basis (euthanasia - medically assisted suicide) and everyday practice in Canada had been briefly outlined for readers not from Canada; for example what is the prevalence of different medical end-of-life practices in Canada.
Response 2:
We have added more information on the legal basis and definition of MAID (please see pg. 4, lines 6-15). Within our current legislation, MAID is defined as “(a) the administering or prescribing by a clinician of a substance to a person, at their request, that causes their death; or (b) the prescribing or providing by a clinician of a substance to a person, at their request, so that they may self-administer the substance and in doing so cause their own death”.

We have added a description of the end of life practices for terminal patients before the legalization of MAID (please see pg. 4, lines 13-15).

We have added more information about the clinical considerations and everyday practice of MAID in Canada (see pg. 6, lines 6-8)

Comment 3:
in this context I asked myself, why withdrawal of treatment as a passive form of MAID was asked in the survey, but not taking into account hastening of death by intensified alleviation of pain / symptoms. Also, what it means concretely to "participate actively in PHD" should be outlined more in detail for readers who are unfamiliar with Canada practices.

Response 3:
Sorry for the lack of clarity around the definition of what it means to "participate actively in PHD"; we recognize that this is important context for readers who are not familiar with the Canadian legislation or the details of our survey. We have amended our manuscript to clarify our terminology of withdrawal of treatment, actively participate in PHD, and MAID (please see pg. 6, lines 5-18). We did not ask about intensified alleviation of pain (palliative sedation) because the focus of our paper was on PHD and MAID; palliative sedation typically does not have the goal or the eventual outcome of hastening death and, hence, not seen as being aligned with the decision to seek and provide PHD or MAID. We did include treatment withdrawal because, at present, it is the standard of care and quite acceptable to many Canadian physicians.

Comment 4:
I am somewhat surprised that declaring a patient dead and filling out a death certificate is equated with palliative care experience. These activities, unlike conversations with the family after death, have only marginally to do with palliative care and, in my opinion, based on these data one cannot conclude that residents with "experience in palliative care" are more willing to prescribe a lethal drug or to administer a lethal injection. Here, one would probably have to write that residents, who are familiar with the occurrence of a death in their professional environment, are more willing to prescribe a lethal drug or to administer a lethal injection. In fact, one would expect residents with a real experience in palliative care (multidimensional access, focus on quality of life, anticipation of problems, early involvement of relatives) to be less likely to actively participate in active forms of MAID.

Response 4:
We based our list of palliative care exposure activities on a prior study of internal medicine residents in the Netherlands who completed a training course on palliative care (Mulder et al.
We agree with Dr. Bally that some of the questions (e.g., completing death certificates, declaring death) are not typical conceptions of what palliative care entails. However, other activities that we captured with our survey—we hope you would agree—are aligned with the typical palliative care core competencies, including managing pain/suffering at the end of life, telling a patient they will die soon, and talking to a family after death. These exposure factors, however, were not significantly associated with the levels of participation in MAID and is the main reason why we did not discuss them further. It’s not entirely clear to us why declaring a patient dead and filling out a death certificate were the only variables that were statistically significant; it may be very well related to your comment that residents who are familiar with the occurrence of a death in their professional environment may be more willing to prescribe a lethal drug or to administer a lethal injection. Nonetheless, we were hoping to establish a common denominator for us to compare our findings to other studies and were, unfortunately, limited by the terminology used in the Mulder et al. paper. Your point is well-taken, however, and we have revised our terminology from “experience in palliative care” to “clinical exposure to death and dying” throughout the paper (for example, please see pg. 8, line 5).

Comment 5:
Unfortunately, only religiosity has been studied as a barrier to participation in MAID and not residents concerns for their own psychological well-being, conflicting personal values or their understanding of their professional role. Of course, other reasons given in the literature (see for example Otte I. “We need to talk!” Barriers to GPs’ communication about the option of physician-assisted suicide and their ethical implications: results from a qualitative study. Med Health Care Philos. 2017 Jun;20 (2):249-256.) can now no longer be investigated; but it would make sense to point out in the text that one has deliberately confined oneself in this study to religiosity.

Response 5:
The other barriers to participation which you have outlined are indeed interesting to consider. While we are unable to add these to our study, we have noted your suggestion in our limitations section for future research and cited the Otte et al. study for the readers’ consideration (please see pg. 18, lines 1-3).

Marie-Eve Bouthillier, Ph.D. (Reviewer 2) Comments:

Comment 1:
This study examines the attitudes of medical residents towards medical assistance in dying and seeks to determine the factors that contribute to participation in assisted dying. This article is important, especially in the context of Canada's agenda to broaden the criteria for access to medical assistance to die. It is therefore important to better understand the factors that motivate physicians to participate in medical assistance to die. Refusal to participate, in the form of conscientious objection or otherwise, or the willingness of physicians to participate are often overlooked in discussions and decisions on the legalization/decriminalization of medical
assistance to die or on the expansion of criteria. Empirical data on these aspects are needed. I congratulate the team for their research efforts.

Response 1:
Thank you, Dr. Bouthillier, for taking the time to review our paper. We agree with you regarding the importance of studying this subject further given the new legislative changes.

Comment 2:
My main comment concerns the concept of MAID. This must absolutely be rectified throughout the article. I do not find a clear definition of MAID in the article. In the abstract, it says: « Attitudes towards the active provision of MAID (e.g., hastening death by lethal prescription or injection) are unknown among Canadian residents. This study examined residents’ attitudes towards MAID and identified factors (e.g., demographics, palliative care experience) that may influence their decision to provide MAID. But in the article, the authors seem to include several activities in MAID (Withdraw Treatment, Participate in PHD, Prescribe Lethal Drug and Administer Lethal Injection), which can create or fuel a certain confusion, already well established in clinical settings.

Response 2:
Thank you for this important observation. We agree that a clear definition of MAID is important to set the context for this study. We have added Bill C-14’s definition of MAID to the article within the Background section (please see pg. 4, lines 6-10). We have also revised the entire manuscript for clarity surrounding our terminology.

We have clarified what we mean by treatment withdrawal, active participation in PHD, and MAID by adding specific definitions for each (see pg. 6, lines 6-18)

Comment 3:
When the authors say that residents are less likely to participate in MAID, what exactly are we talking about? End-of-life care in general? Euthanasia? Discontinuation of treatment? Not offering a treatment that would sustain life (e.g., a ventilator)? Continuous palliative sedation? Palliative care? Assisted suicide - that includes giving the knowledge about how to suicide and prescribing lethal drug? Injecting morphine into a patient with the intention of accelerating death and/or relieving suffering? Plus, what does participation in PHD include? Evaluating the patient for MAID eligibility according under Bill C-14? Preparing the medication? This needs more precision. Those concepts are different and imply different actions. It is important to establish the categories/definitions clearly at the beginning of the manuscript, and stick with it until the end.

Response 3:
These points are well taken. We have revised the entire manuscript for added clarity on each of these concepts. Our background section now also contains explicit definitions of the terms.
Comment 4:
Moreover, the authors do not seem to have asked any questions about continuous palliative sedation. Why such an omission?

Response 4:
We did not ask about palliative sedation because the focus of our paper was on PHD and MAID, and palliative sedation is not typically part of the scope or flow of practice of those tasked to perform PHD and MAID. Palliative sedation typically does not have the goal or the eventual outcome of hastening death and, hence, not perceived as being aligned with the goal of PHD or MAID.

Comment 5:
The distinction between active and passive MAID is insufficient. Referring to passive and active euthanasia are somewhat outdated names in our opinion. These «MAID» activities must be seen in a clinical continuum of end-of-life care, and the authors should define all concepts accordingly. My recommendation would be that the authors use definitions consistent with the scientific literature or Bill C-14. I consider this a major revision and it should be corrected throughout the text (results, discussion) for clarity and to limit confusion.

Response 5:
This point is well taken. We have revised our manuscript to include a description of the clinical continuum of end-of-life care (please see pg. 6, lines 16-18)

Comment 6:
Specific lightening points:
p. 4 line 13 «Yet, studies in the U.S. and Canada indicate that residents may not be receiving adequate training in providing end-of-life care, nor are they taught the medical ethics of providing care to a potentially non-autonomous, dying patient (2-4)»

It is not clear to me what do the authors mean by «the medical ethics of providing care to a potentially non-autonomous, dying patient». Please clarify.

Response 6:
The main issue that we had wanted to highlight here is that there is current a lack of education around how to provide good end-of-life care to patients who are frail and may have severe cognitive deficits (e.g., patients with advanced dementia). For example, please see the paper Ethical issues in caring for patients with dementia by Hughes et al. Without a clearly outlined advance directive, the autonomy of patients with severe cognitive deficits may be compromised by the preferences of and healthcare decisions made by the patients’ family members and/or providers. While we were mainly thinking of patients with advanced dementia in this case, they are not the only patients who might be potentially non-autonomous.

Comment 7:
p.4, line 22 «Similarly, in Mexico, residents have limited support (12-55%) for MAID, but would be more willing to participate if it were legal in the country (10-12)»
This sentence needs clarification. This is again related to the lack of a clear definition for MAID and related terms in the manuscript.

Response 7:
We have revised the manuscript for precision on our definition of MAID (please see pg. 4, lines 6-10).

We further revised the manuscript to cite papers that describe MAID only (that is, provision of lethal injection or prescription specifically) (please see pg. 5, line 10).

Comment 8:
p.5, line 22 «Describe Canadian family medicine residents' attitudes towards the active provision of MAID (i.e. PHD).»
It seems that you are not only providing results for active provision of MAID, but also prescribing and the passive form of MAID as you described.

Response 8:
Yes, this is correct. We have revised our language on this point (see pg. 6, line 22) and have clarified our terminology in the background section (see pg. 6, lines 6-18).

Comment 9:
p.11, line 13 «Overall, 40.9% of the residents surveyed expressed they would actively participate in PHD for a patient who qualifies for MAID in Canada. Lower agreement to participate was found with increased intensity of involvement in the active provision of MAID. What is the difference between active participation in PHD and active provision of MAID? These statements should be made clearer.

Response 9:
This point is well taken. We have clarified what we mean by active participation in PHD and active provision of MAID by adding specific definitions in the Background section (please see pg. 6, lines 6-18).

Comment 10:
p.11, line 17 «only a few palliative care activities remained statistically significant. »
The palliative care activities are specified in the abstract but not in the manuscript. Why?

Response 10:
In responding to the comments from another reviewer, we acknowledged that some of our exposure activities (see the Exposure section of the questionnaire) are reflective of palliative care (managing pain and suffering, talking to a family after death), while others activities are more reflective of general experience with death and dying (completing a death certificate, pronouncing death). Since the only exposures that reached statistical significance in our logistic regression were from the latter category (general exposure to death and dying), we agreed to change our terminology from “exposure to palliative care” to “exposure to death and dying” throughout the manuscript and abstract.
Comment 11:
p.13, line 18 «Residents in our study were more agreeable to participate in MAID than physicians in Canada (40.9% vs. 29%) (1) and less agreeable than Canadian medical students (61%) (19).
I am uncomfortable with this comparison that seems to compare different things (this study active and passive MAID vs the other study only active MAID).
«According to results of a CMA member survey presented at the meeting, many doctors remain opposed to assisting in a patient's suicide. Only 29% of those surveyed said they would consider providing medical aid in dying if requested by a patient, 63% would refuse outright and 8% were undecided. » https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4577361/
Consulted September 23th 2019

Response 11:
Thank you for pointing out this important difference. The survey results cited in the CMAJ article by Vogel was based on a question that asked: “Following the Supreme Court of Canada decision regarding medical aid in dying, would you consider providing medical aid in dying if it was requested by a patient?”. Though the phrasing of this question does seem to suggest that they are inquiring about one’s active participation in MAID, we did not want to assume that the intention was to capture the proportion of physicians who would actively engage in the administering or prescribing of a lethal substance, at the patient’s request, to hasten a patient’s death. Because the survey did not explicitly describe what it means to “consider providing” MAID (i.e., are they asking about the physician’s willingness to participate in assessing the patient’s eligibility or actually performing a lethal injection?), we interpreted this as being willing or agreeable to participation in MAID. Unfortunately, the imprecision in terminology is a commonly cited shortcoming of many studies on this topic. We have attempted to rectify this by using the terminology from Bill C-14.
However, this point is well taken and we have revised the manuscript to caution the reader when we compare these results (see pg. 15, lines 12-14). We have also added a section describing this very problem in our limitations section (see pg. 17, lines 11-18).

Comment 12:
Be careful with the data from Quebec on the prescription of lethal drugs, although legal in Canada, assisted suicide is not allowed in Quebec only euthanasia, so residents may be more reluctant to do so due to this prohibition. I saw that the data were not in the Table, but this could be explained in the manuscript.

Response 12:
This point is well taken and thank you for helping us contextualize our observations. Dr. Bouthillier is correct in that Quebec residents are, in general, more hesitant to participate in MAID (although perhaps more likely than residents from other provinces). The note about Quebec’s restriction on lethal prescription may, in fact, be a reason why Quebec residents are reluctant to participate in MAID. We have revised our manuscript to try and explain this hypothesis (please see pg. 15, lines 6-7).
Comment 13:
There is redundancy in the presentation of results in some places. This aspect needs to be reviewed. For example:
P.12, line 20 « Female residents were less likely to be willing to prescribe a lethal drug than their male colleagues.»
And
P.12, line 1 « and that females were less likely to prescribe a lethal drug than males. »

Response 13:
This point is well taken. We have removed the findings about Quebec and females from the brief summary that starts the discussion to prevent redundancy.

Mathieu Bernard (Reviewer 3) Comments:

Comment 1:
In my opinion, this paper focus on an important topic with essential clinical implications. I express below some questions arising from the reading of this article according to each section. I am not an English native speaker and I apologize to the authors and editors for my sometimes approximate English in this review.

Response 1:
Thank you, Dr. Bernard, for your insightful comments and for taking the time to review our paper.

Comment 2:
Background
1. p.1, l.14-26; the different forms of administration of medical assistance in dying should be detailed in the background (withdraw treatment, participation in PHD, prescription of lethal drug, administration of lethal injection).

Response 2:
We agree that this would be helpful. We have added more description of the process of MAID in Canada and elaborated on our specific definition of the terms mentioned above (please see pg. 4, lines 6-18).

Comment 3:
2. p.1, l.14-26; for non-Canadian readers, a brief explanation of content and implications of the Bill C-14 should be added, as the major changes pre-post the Bill C-14 introduction.

Response 3:
We agree that this would be helpful. We have added more information on the legal basis of MAID (Bill C14) and a description of end of life practices for terminal patients before the legalization of MAID (please see pg. 4, lines 5-16).
3. p.1, l.50-58; what do they author mean by "limited support"?

Response 4:
We want to apologize if this was not clearly articulated in our paper. By “limited support for MAID”, we mean that they may be hesitant to participate in MAID.

Comment 5:
Methods
1. p.6, l.20-23; why did the authors not include the PGY3 residents?

Response 5:
We did not include PGY 3 residents partly because some residents in their third year may have already decided to specialize in palliative care. These residents may have significantly different opinions on MAID than their non-specialized peers. The aim of our survey and this study was to collect information on physicians who will mainly focus their future practice in primary care.

Comment 6:
2. p.7, l.6-7; what do the authors mean by "grant permission to distribute our survey"?

Response 6:
Only the program administrators at the invited schools had access to all of their residents’ email addresses. Without permission by these administrators we could not distribute the survey. Some administrations required our survey to undergo a second round of ethics approval by their research ethics board. Other administrators required our survey to be analyzed by an in-house committee before they would be approved for distribution to their residents.

Comment 7:
3. p.7, l.10-14; independently of the exposure to palliative care activities, did the authors assess if the residents had a specific training in palliative care?

Response 7:
Advance level training in palliative care occurs at the PGY3 level in Canada, which is why these residents were excluded from our study as we wanted to have results generalizable to mainly future primary care physicians.

Comment 8:
4. p.7, l.14-19; concerning exposure to palliative care activities, what was the rationale to take into account only these specific activities? Why did the authors not consider other important palliative care activities, like addressing psychological or existential issues in the end of life, helping patients or relatives to realize advance care planning or anticipated directives? These aspects could also influence the attitudes towards the difference forms of medical assistance in dying.

Response 8:
This point is well taken and was also raised by other reviewers of this paper. We based our selection and definition of palliative care exposure activities on a prior study of internal medicine.
residents in the Netherlands who completed a training course on palliative care (Mulder et al. Palliative Medicine 2009; 23: 360-369). We took this approach with the intention of enabling comparisons across countries. Some of the questions that we had included (e.g., regarding managing pain/suffering at the end of life, telling a patient they will die soon, and talking to a family after death), we believe, do within the domain of palliative care. Unfortunately, these exposures were not significantly associated with levels of willingness to engage in MAID, which is one of the primary reasons why we did not discuss them further in the paper. We agree that it would have been interesting to investigate the other aspects of palliative care, such as advance care planning, that Dr. Bernard had mentioned above and will recommend the exploration of the role of experience in palliative care in future studies.

Comment 9:
5. p.7, l.34-58; what kind of analyses were used for the proportions differences according to the demographic variables when considering the MAID statements? They should mention it.

Response 9:
We used univariate logistic regression models to test the difference in the proportion of residents who expressed the willingness to participate in MAID (i.e., reported “agree” to each statement regarding MAID) across all characteristics listed in Table 1. This has now been clarified on pg. 8, lines 13-19.

Comment 10:
6. p.7, l.34-58; why do they authors state that there is a limited sample size? There is approximately 240 participants, if I am not wrong, and this sample size (approximately 240) doesn't appear to me as a "small sample size"? Were there other reasons to decide to collapse the responses of the residents regarding their MAID participation, acknowledging that collapsing data for analyses often involves reduction and simplification?

Response 10:
While we agree with Dr. Bernard that 247 respondents is not a small sample – in fact, as we had noted in our paper that this is one of the largest study of its kind – when 247 responses are divided across the six response categories (i.e., strongly disagree, disagree, neutral, agree, strongly agree, and unsure) then stratified by resident characteristics that include multiple options (e.g., Asian, Black, Hispanic, Caucasian, Aboriginal, Other), some cells contained the responses of only 2-3 residents; presenting the results in a disaggregated form would have limited the generalizability of our findings.

Comment 11:
7. p.7, l.54-57; what was the logic to differentiate the palliative care exposure with these three categories? Because of the distribution of the number of patients mentioned by residents?

Response 11:
Yes, that is correct. In our initial analysis of the data, we observed a right-skewed distribution in the residents’ response to the questions on palliative care exposure (with most residents reporting 0 to 1 case in each exposure category). At the same time, we also noted that residents who appeared to have high levels of exposure to death and dying were reporting between 10 to 60
cases in at least two of the four exposure categories. Because there were few residents with high levels of exposure (more than 20 cases), to ensure that we are able to draw meaningful conclusions regarding the level of exposure and its association with the residents’ willingness to participate in MAID or PHD, we decided to group all residents with 11 or more cases. We felt that the resulting grouping adequately represented residents with no exposure, limited exposure, and fair exposure to the different death and dying activities given the distribution in responses that we had observed initially.

Comment 12:
Results
As a general comment, I would suggest to avoid as much as possible the redundancies between the content of the text and the content of tables and figures. Would it be possible to mention in the text a synthesis of the most salient and significant results, without adding, as far as possible, the percentages, OR, and p-values if they already are in the tables and figures?

Response 12: The point is well taken. We have revised our results and discussion sections accordingly. We have highlighted the values for the most significant results.

Comment 13:
I would also report the number of participants considered for the logistic regression analyses and the confident intervals in both the tables 2 and table 1 of the supplemental material.

Response 13: Thank you for these suggestions. We have updated Table 2 and Supplementary Table 1 with the sample size included in each regression model and the confidence intervals instead of standard errors.

Comment 14:
1. p.10, l.26-50: when looking at the predictors of residents' participation, why did the authors not include the residents' age, and the PGY in the regressions analyses?

Response 14: Please accept our sincerest apologies for this oversight. Thank you for identifying this error on our part! We have now updated Table 2 and Supplementary Table 1 with logistic regression models that include age and PGY as predictors.

Comment 15:
2. p.11, l.1-9 and p.25, supplement table 1: I am not sure to well understand this table. Is it correct that the authors added the palliative care exposures in the multivariable model in order to assess if the associations highlighted with univariate models (figure 1) were still present? If yes, I would change the title to be more specific. The titles are currently the same for the table 2 of the article and the table 1 of the supplemental material.

Response 15: Yes, we did in fact add each type of palliative care exposure to our multivariable regression model to test their independent effect, controlling for all other characteristics (i.e., age, sex,
school, religion, practice, and ethnicity). As these are essentially the same models as those presented in Table 2, we had decided to use the same table heading. However, given Dr. Bernard’s comment, we now recognize that this could be confusing. We have changed the title of the supplementary table to “Logistic regression models to examine the influence of clinical exposure to death and dying on residents’ willingness to participate in MAID”

Comment 16:
3. p.22, table 1: please explain PGY under the tables, as you did with PHD.

Response 16:
We apologize for this oversight. We have since added these changes to Table 1 (see legend). Thank you!

Comment 17:
4. p.25; supplement table 1; why did the authors insert twice "prescribe lethal drug" and not all the MAID activities like in table 1? I would also suggest to report the results for "tell a patient they will die soon" and "talk to a family after death", even if it's not significant results, in order to be coherent with the results of demographic variables which are all included in the table.

Response 17:
We agree with Dr. Bernard’s suggestion, though we were initially hesitant to include all 16 models in the supplementary document when most of the models did not indicate a statistically significant association between exposure to death and dying with the residents’ willingness to participate in MAID and PHD. Nonetheless, we have supplied the additional model outputs in this resubmission for Dr. Jox and the editorial team’s consideration.

Comment 18:
Discussion
In general, I find that the discussion does not refer enough to ethical aspects or principles to comment and explain the results. Because this article was submitted to BMC Medical Ethics, I would find interesting to use ethical arguments to discuss the results and also to add potential implications for future training and support for young family residents in order to gain and acquire more self-confidence.

Response 18:
As a descriptive study, we hope that our observations would spark discussions within the medical ethics and law communities pertaining to the delicate balance between a physician’s moral and professional obligations to provide care that reflects the preferences and values of his/her patient and their right to conscientious objection. We also agree that these findings may have implications for how the medical education as well as the health care system could better educate residents on MAID/PHD, and support them (as well as staff physicians) when they are conflicted by their duty to treat those who are ill and their patient’s wish to die. However, since it would be possible within most Canadian provinces for health care providers who are unwilling to participate in MAID or PHD to refer their patients to another provider (http://health.gov.on.ca/en/pro/programs/maid/), we do not feel that these findings indicate that patient care might be compromised by the residents’/physicians’ personal beliefs. As such, while
findings presented here may be used in other studies that want to better understand the sources of influences behind some physicians’ conscientious objection to MAID and PHD, we feel that the impact of this on the medical curriculum would be minimal.

Comment 19:
1. p.12, l.11-46; an important point of the results concerns the effect of religion on participating in MAID activities. I would find interesting to more develop (i) why is it more ethically challenging for religious residents to participate in MAID activities and (ii) what could explain the differences between Christianism and other religions.

Response 19:
While it would be possible to speculate on the ethical challenges faced by residents who adhere to certain religions or religious beliefs, we feel that such speculation may be out of scope as our survey did not explicitly ask about how religion may have influenced their perspective of MAID and PHD. The inferences that we are able to draw from this finding are, unfortunately, limited by the survey’s design. Nonetheless, we did add more details with respect to known Christian principals related to the moral consequences of assisted death and how it may be perceived as murder to some believers (please see pg. 12, lines 22-23). A comprehensive discourse on this topic would naturally include a dissection of each religion’s stance on death, dying and the moral implications of murder/assisted death, which we would not be able to comment on with an aggregated variable that included all non-Christian religions.

Comment 20:
2. p.12-13; concerning differences between male and female and beyond the fact that there is an inconsistency between the studies, would it be possible for the authors to make hypotheses that could explain why women residents are less likely to participate in MAID activities in their specific residents population?

Response 20:
Unfortunately we could not find another study that has hypothesized as to why they found a difference between male and female residents’ opinions on MAID.

There are some studies on female physicians (non-residents) that support our findings (Evenblij et al, PMID 31510976, Levy et al PMID 22494462), yet others still find no difference (Dany et al, PMID 26542685, Abohaimed et al PMID 30703772).

Abohaimed et al suggest: “One explanation for such a finding may be that women “are likely to make more ‘emotional’ and ‘principled’ decisions” [18]. Another possible reason for the more conservative attitude among female doctors is that women probably make more measured decisions.”

To our knowledge no study has specifically investigated why female physicians may object to MAID more.
We do not find the hypotheses cited in the literature to be soundly grounded in evidence and we would prefer to not speculate further as others have done. Despite this, we agree that this is an important question and should be further explored using a qualitative approach.

Comment 21:
3. P.15, l.12-18: again I am not sure that a sample size of n=247 is a small sample size. In addition, the authors mention the low response rate as a limitation. Perhaps there is also a selection bias in this study. Maybe the more religious residents are more likely to participate in such study since assisting dying represents a very sensitive topic given their beliefs and values. What do they authors think about it? Is the proportion of the Christian residents in this study representative of the general population in Canada or the Canadian physicians' population? To what extent this bias may have influenced the results?

Response 21:
We have listed our sample size as a limitation because it is small relative to the eligible population of medical residents in Canada. We acknowledge that the proportion of individuals who self-reported as Christians in our study is not representative of the general population in Canada (our study = 49% vs. Canada = 66%); however, this is not the main population that the study is meant to be generalized to. We agree that it would be important to know whether there may be a selection bias in our study; however, it would be difficult to assess the magnitude of bias or how well this study represents the population of Canadian medical residents/physicians as such data does not currently exist.