Author’s response to reviews

Title: Patient motives for contacting out-of-hours care in Denmark: a cross-sectional study

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Version: 3 Date: 29 Jan 2020

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Dear Editor,

We submit our revised manuscript entitled “Patient motives for contacting out-of-hours care in Denmark: a cross-sectional study” (ID EMMD-D-19-00075R2). Thank you for considering our manuscript for publication and both reviewers for the positive and constructive comments. The valuable remarks helped us to improve the manuscript.

We carefully revised our manuscript according to the reviewer’s comments. We include a point-by-point response detailing our considerations and reactions upon the comments and suggestions raised. We revised the manuscript accordingly, adding a clean copy and an annotated copy using Track Changes to highlight our changes.

We hope that you will find that the suggestions and criticism have been met in a satisfying way and that the manuscript has improved accordingly.
Yours faithfully, on behalf of the other authors,

Linda Huibers

Aarhus University, Research Unit for General Practice, Denmark

Point-by point response

Editor Comments:

We request that a point-by-point response letter accompanies your revised manuscript. This letter must provide a detailed response to each reviewer/editorial point raised, describing what amendments have been made to the manuscript text and where these can be found (e.g. Methods section, line 12, page 5). If you disagree with any comments raised, please provide a detailed rebuttal to help explain and justify your decision.

Please also ensure that your revised manuscript conforms to the journal style, which can be found in the at the Submission Guidelines on the journal homepage.

David Cone (Reviewer 1):

General Comments:

Comment 1) It is stated that "new knowledge in this field may guide patients in choosing the most relevant service for their health problem[s]" - but the paper is targeted at clinicians, not the general public.

Response 1) We thank the reviewer for this valuable remark. We have specified our statement, to be in line with the targeted readers and the content of our manuscript.
Background section, line 12-13, page 4: “More insight into patients' motives for choosing specific out-of-hours health care services is important as new knowledge in this field could be used to make suitable adjustments of the existing health care services and to develop initiatives guiding the patients in choosing the most relevant service for their health problem.”

Comment 2) How were patients handled who did not contact EMS or out-of-hours primary care themselves? For example, a bystander calls 1-1-2 after witnessing a serious motor vehicle collision, and four patients are transported by EMS to various EDs with various injuries. Are these patients included in the study? "Bystander calls" are mentioned in the "Data collection" section, but I cannot tell how these were handled.

Response 2) We included all patients with a contact to EMS, regardless of whether the caller was the patient him-/herself or a bystander. The final questionnaire included a question about the decision maker for initiating the contact (i.e. patient himself/herself, family member, other known person or unknown person). As we acknowledge a lack of details here, we have made some adjustments to increase clarity.

Methods section, paragraph Study population, line 7, page 6: “We included patients who contacted out-of-hours primary care or the EMS outside office hours (i.e. weekdays from 4 pm to 8 am, entire weekends and bank holidays), either themselves or by another person.” And paragraph Study population, line 15-16, page 6: “Contacts with a bystander calling were also included, which is assessed more common for EMS contacts.” The lack of first-hand information, by sending questionnaires to the patient rather than the decision maker for the contact, may have introduced some information bias. Yet, as presented in table 1, most bystander calls were made by family members or other known persons. Here, we assume that the contact has been discussed after the episode. In the questionnaire, we had included the following statement: “If you did not participate in making the decision to contact the out-of-hours service, we would still like you to answer the questionnaire although there may be questions that you will not be able to answer. In any case, we ask you to return the questionnaire.”

We added the following statement to the discussion section, paragraph Strengths and limitations, line 3 to 5, page 15: “We included all contacts, including bystander calls to EMS. As questionnaires were answered by patients, some information bias may appear for bystander calls. Yet, most calls were made by family members or other known bystanders.”
Comment 3) The "Conclusions" section doesn't really say anything - adding phrases with some of the key motive and factors would be helpful.

Response 3) We have made some adjustments, adding key results. Conclusion section, line 24-15, page 15: “We identified five key patient motives for seeking acute health care at out-of-hours primary care and the EMS; some of these motives were partly overlapping (i.e. ‘unpleasant symptoms’, ‘perceived need for prompt action’ and ‘perceived most suitable health care provider’). Several factors were associated with contacting OOH-PC versus EMS.

Conclusion section, line 1-4, page 16: “Most motives relating to own assessment and expectations, previous experience and knowledge, and own needs and wishes were related to a higher probability of contacting EMS versus out-of-hours primary care, whereas most motives relating to perceived barriers and benefits were related to a lower probability. This knowledge could contribute to adjustments of the current health care services, with the aim to optimise patient safety and service level without increasing health care costs.”

Minor copy-editing comments:

Comment 4) 'Health care' is two words, per the AMA Style Guide.

Response 4) We have made adjustments accordingly.

Comment 5) I am generally averse to creating new acronyms just to save some typing - I recommend dropping non-standard acronyms such as "OOH-PC" and "OOH" and just writing out the words.
Response 5) In general, we agree with the reviewer considering the use of new abbreviations, though the use of OOH has become quite common in our research area throughout the last years. We have written out the words for the abbreviations OOH-PC and OOH as the reviewer suggested, improving readability. However, this has considerable meaning for the word length of our manuscript; if the editor has strong issues against this change, we are willing to add the abbreviation OOH again.

Comment 6) I recommend changing 'gender' to 'sex' throughout the paper, since biological male/female (sex - as in item 2 of the questionnaire) was studied and reported, not individual psychosocial self-identification (gender).

Response 6) We have adjusted ‘gender’ to ‘sex’.

Reviewer 2 (Reviewer 2):

Overall, I think this study is excellent in many ways. It addresses an important question, and is well designed, well written, and has important and relevant findings.

There are several suggestions for improvement:

Comment 1) The comparison in the literature is primarily about calling off hours primary care v. EMS rather than using these services directly, which is more common across the world in systems that don't have such a robust telemedicine service,

Response 1) We can see the point of the reviewer, suggesting that generalizability largely depends on the existing health care system. As written, in Denmark patients need to call for access to primary care or EMS, making another study approach not feasible. We included literature in line with this type of access to health care systems, as comparison with other systems seems less correct. However, to address the point of the reviewer, we have adjusted our statement on motives for self-referring to the emergency department, which is more common in systems without telephone access to these services. Discussion section, paragraph Comparison with existing literature, line 5, page 13: “In addition, some motives seem to match those found for patients self-referring to the ED, such as easier access to diagnostic tests and symptoms perceived to be too severe to be handled by the GP.”
Furthermore, we adjusted our statement in the discussion section, paragraph Strengths and limitation, line 7, page 15, in which we address the issue of generalizability. “Finally, generalisation of findings to other populations in similar health care systems and health care systems with direct use of out-of-hours services should be made with caution, as the access to both out-of-hours primary care and the EMS is free of charge in Denmark and access is by telephone call.”

We also included an additional statement on the access to out-of-hours care in the methods section, paragraph Design and setting, line 12-13, page 5: “Direct use (i.e. self-referring) to out-of-hours primary care and the ED is low in Denmark, due to required telephone access.”

Comment 2) More information is needed about the validation of the survey as well as how it changed based on feedback.

Response 2) In the paragraph development of questionnaire, we described the process of validation, which included several steps; we had internal research meetings and an external feedback round as well as two tests in the GPC waiting room and interviews with four patients in a GP practice, to achieve face and content validity of our questionnaire and to ensure clarity. Furthermore, we did three small-scale pilot studies. These steps mainly resulted in language adjustments to clarify the predefined motives, rather than adding additional motives. Additionally, we shortened the questionnaire considerably during the development process, deleting questions not directly related to the research aim, with respect to the response rate.

Comment 3) I am a bit concerned about the closed ended nature of this and that respondents were only allowed to rank 26 barriers. How are we to know that these are the only barriers?

Response 1) Our list of 26 motives were based on an extensive literature study, and were checked with patients in the GPC waiting room. Yet, this does not guarantee that our list of motives was complete. Therefore, we have added a statement to the discussion section, paragraph Strengths and limitations, line 23-25, page 14: “Our list of 26 predefined motives may not be complete, thus introducing some bias. Yet, as our list was defined after an extensive procedure, we expect this bias to be minimal.”
Comment 4) The response rate and non-response bias are a concern,

Response 1) We agree with the reviewer that both the low response rate and the non-response bias include some bias. These issues have been addressed in the discussion section, paragraph Strengths and limitations, line 15-18, page 14, and no further changes have been made.

“We cannot rule out selection bias, even though our response rate (44.9%) was acceptable for this type of study. The non-response analysis showed that some characteristics differed between our respondents and non-respondents. This may have influenced our results on important motives for contacting out-of-hours care, as some motives related to specific patient groups.”

Comment 5) There is a lot of detailed statistical analysis that may make it more confusing for some readers. In my opinion, this sort of work is much more straightforward without complex statistics or hypothesis testing.

Response 1) We assume that the reviewer mainly refers to the analyses of risk ratios in table 2 and figure 2, in which we aim to identify motives for contacting the EMS as opposed to contacting out-of-hours primary care and to obtain risk ratios. In our opinion, this information has an additional value, helping the reader to assess the differences between the percentages of important motives given in table 2. In figure 2, a visual overview of the difference in motives between children (with calls by caregivers) and adults gives a more detailed picture. Therefore, we would like to keep these more detailed analyses for the interested reader.

Comment 6) An international comparison would be relevant, particularly where there are cost barriers to care which don't appear to be present in Denmark.

Response 1) We agree with the reviewer that an international comparison would be interesting, as one has the opportunity to investigate the relation of different organizational factors with motives for help seeking. We have added a statement to the discussion section, paragraph recommendations for future research and clinical practice, line 17-18, page 15: “Furthermore, an international comparison could be interesting, giving the opportunity to study different organizational and health care system factors in relation to motives for help seeking.”
REQUESTED REVISIONS:

Comment 7) The only other recommendation would be to more clearly differentiate the findings from this v. other studies and how this adds to the knowledge on this topic, which is well researched.

Response 7) We have made some adjustment in the discussion section, paragraph Comparison with literature, to differentiate between findings from our study and findings from other studies.

Line 6, page 12: “As in other studies, women more often than men contacted out-of-hours primary care, and a considerable part of calls to out-of-hours primary care concerned children.”

Line 15, page 12: “Worry and need for reassurance are frequently mentioned motives in out-of-hours primary care, as also found in other studies.”

Line 18-19, page 12: “We found that perceived availability and accessibility of own GP play a role for a minority of patients, as found by Keizer et al.”

Line 23, page 12: “Booker et al. also reported that worry and anxiety were two important motives.”

Line 24, page 12: “Furthermore, they found that callers with care responsibilities tend to contact the health care service that is expected to provide the promptest response …”

Page 13, line 2: “In line with our findings, Ahl et al. found that …”

Page 13, line 4: “In addition, some of the identified motives seem to match those found for patients self-referring to the ED, …”

Page 13, line 15 “The identified motives …”

Page 13, line 23: “Several other studies …”

Page 13, line 25: “In our study, …”
Furthermore, we have emphasized the relevance of our study in relation to previous studies on the topic. The benefit of this study is the parallel data collection of patient motives for calling out-of-hours primary care and the EMS, which, to our knowledge, has not been performed before. Studying motives for calling one of these two settings within one health care system and one study design makes comparison straightforward.

Discussion section, paragraph Comparison with literature, line 3-5, page 12: “To our knowledge, no previous studies have compared patients calling out-of-hours primary care and the EMS within one design, but several studies have investigated patients calling out-of-hours primary care.”

Discussion section, paragraph Strengths and limitations, line 9-10, page 14: “We conducted a large-scale study exploring patient characteristics and motives to contact the out-of-hours health care services in two Danish regions, with parallel data collection at out-of-hours primary care and the EMS.”