Author's response to reviews

Title: Primary care physicians' practice regarding diabetes mellitus diagnosis, evaluation and management in the West region of Cameroon

Authors:

Ahmadou M Jingi (jingiahmadoumusa@yahoo.co.uk)
Jobert Richie N Nansseu (jobertrichie_nansseu@yahoo.fr)
Jean Jacques N Noubiap (noubiapji@yahoo.fr)

Version: 3  Date: 14 March 2015

Author's response to reviews: see over
TO THE EDITOR

Primary care physicians’ practice regarding diabetes mellitus diagnosis, evaluation and management in the West region of Cameroon

Dear Editor,

I thank the reviewers for their careful reading of our manuscript and for their helpful comments and suggestions. We have made changes accordingly and we believe that the result is a greatly improved paper. All the new changes are marked in blue in the revised version. Our point-by-point replies to reviewers are below. We are most grateful for the opportunity to publish our manuscript in BMC Endocrine Disorders and thank you for your consideration.

Sincerely,

On behalf of the co-authors,

Dr. Jean Jacques N. Noubiap.

Internal Medicine Unit, Edéa Regional Hospital, PO Box 100 Edéa, Cameroon; Tel: 00237 679644081; Email: noubiapjy@yahoo.fr
Reviewer’s Comment 1

The authors conducted structured interviews with a pretested questionnaire. Additional details about the structured interview process are required. For example, were all of the interviews conducted by the same researcher? Were the interviews audio recorded in addition to filling out the questionnaire? Did the physician have the opportunity to read the questions along with the interviewer? Interesting and well design

Authors’ Response 1

Thanks for the comment and the questions. In fact, all the interviews were conducted by the same researcher who was a medical doctor. They were not audio recorded, and the Physicians had the opportunity to read the questions along with the interviewer. A sentence in this regard has been added in the revised manuscript as it reads on page 4: “All the interviews were conducted by the same researcher who was a medical doctor. They were not audio-recorded, and PCPs had the opportunity to read the questions along with the interviewer”.

Reviewer’s Comment 2

In the Methods section under “Treatment and follow-up of diabetes patients,” the authors categorize physical examination measurements as attitudes. A physical examination is not a physician attitude. Use of the term attitude is very misleading. Further, the authors categorize ‘attitudes’ as ‘good’ or ‘bad’ which implies a value judgment. I strongly recommend that the authors do not use this terminology as it does not accurately reflect
the information garnered from the questionnaire. The authors could rename this variable as ‘complete physical examination’ and ‘incomplete physical examination’ to more accurately describes the data.

**Authors’ Response 2**

Thank you for raising this point. Thanks also for the suggestion, in the regard of which the variable “completeness of diabetes patients’ physical examination” was categorized as “complete” or “incomplete” throughout the new version of the manuscript.

**Reviewer’s Comment 3**

In the Methods section under “Treatment and follow-up of diabetes patients”, the authors categorize the normalization of a patient’s glycemia as ‘good’ if the physician maintains the current treatment or ‘bad’ if the physician reduces the dose of the medication, switches to other drugs, or stops the treatment. This categorization is too simplistic and ignores key information pertaining to patients’ treatment and health outcomes. For example, a patient may have a hemoglobin A1C of 6.5% but be experiencing hypoglycemia, particularly if prescribed a sulfonylurea (one of the main classes of medications prescribed by the physicians in the study). If a patient is experiencing hypoglycemia, a physician may recommend that a patient change his/her dose or switch to another medication. Thus, this question does not reflect the complexities of diabetes care. The authors should remove the value labels of ‘good’ and ‘bad’ from this question or consider deleting it from the analysis as it does not adequately reflect a physician’s knowledge about diabetes treatment.
Authors’ Response 3

Thank you for raising this important point. As you suggested, we cancelled this variable from analyses.

Reviewer’s Comment 4

In the Discussion section, the authors place numerous value judgments (e.g. bad, ignorant) on the physician participants in the study. The authors need to be careful to not include personal opinions about the participants in the study, but rather focus on describing the data factually and without judgment. For example, on page 8, line 20, the authors should remove ‘bad’ from the sentence. Here is a revised sentence that does not include value judgments: “This study shows that the majority of PCPs knew the DM diagnostic criteria for FPG (72.7%); however, fewer PCPs knew the criteria for other glycemic parameters such as PPG, random glycemia and HbA1c (37.9%, 19.7%, and 32.8% respectively).” Also, on page 10, line 6, the authors should remove the term ignorant from the text. Here is a revised sentence: “These results suggest that our PCPs may not be familiar with international guidelines with respect to evaluation of diabetes patients and control of comorbidities.” The authors need to go through the text line by line and remove all descriptions of the findings that include value judgments.

Authors’ Response 4

Thank you for these concerns and suggestions. These sentences have been rephrased where appropriate. The manuscript has also been thoroughly screened to remove all descriptions including value judgments.
Reviewer’s Comment 5

The authors use the term “diabetic” throughout the manuscript. On the simplest level, the use of the term "diabetic" demonstrates lack of familiarity of the literature and accepted current norms. The authors should use the term “diabetes patients” or patients with diabetes.”

Authors’ Response 5

Thank you for this suggestion. Changes have been made accordingly throughout the new manuscript.

Reviewer’s Comment 6

On page 8, line 24, the authors use the term ‘rendezvous’ to describe diabetes follow-up. This term is not appropriate and should be removed. I recommend the term ‘appointment’ or ‘meeting.’

Authors’ Response 6

Thank you for this suggestion. The term “rendezvous” has been replaced by “appointment” as one can read on page 10: “Ninety seven percent of our PCPs usually gave follow-up appointments to their diabetes patients, the most encountered frequency being once in a month”.

Reviewer’s Comment 7
On page 9, line 6, the authors state that PCPs are getting older and refer to the mean age of the study. A mean age of 38 years is not old for a PCP. The authors need to provide a better explanation for older age in this section because the mean age of the participants does not support this argument.

Authors’ Response 7

Thank you for raising this point. We wanted to say that our PCPs are adults, and no more youngsters, to stress on the fact that teaching methods have to be adapted in this regard. We consequently changed the phrase “getting older” into “adults” as it reads on page 8: “One should however bear in mind that our PCPs were adults”.

Reviewer’s Comment 8

On page 11, line 12, the authors should replace the term ‘deserved’ to ‘allocated’ or ‘spent.’

Authors’ Response 8

Thank you for this suggestion we have taken into account as it reads on page 10: “Although we did not ask to PCPs how much time they spent with diabetes patients during consultations, we can hypothesize that this time is not that so much, given their volume of work”.

Reviewer’s Comment 9

On page 12, line 5, the authors should include the location of the study to provide context to the summary statement.
Authors’ Response 9

Thank you for this suggestion. It has been taken into consideration as one can read on page 11: “In the West Region of Cameroon, PCPs knowledge and practices towards diabetes mellitus diagnosis, evaluation, treatment and follow-up are not optimal at all”.
Reviewer’s Comment 1

I read with great interest the work done by Jingi and colleagues. This work is important for improving the diagnosis of diabetes and monitoring of diabetic patients. One of the keys to hunker down diabetes is to have competent actors in order to get there. This study demonstrates that in the West Region of Cameroon, the level of knowledge is inadequate, attitudes and practices are questionable. This study will allow decision making to implement a policy to address these problems.

Authors’ Response 1

Thank you for this comment.

Reviewer’s Comment 2

Authors should indicate the profile of the person and how much persons conducted the interviews.

Authors’ Response 2

Thanks for this concern. We elaborated more on interviews in the revised manuscript as it reads on page 4: “All the interviews were conducted by the same researcher who was a medical doctor. They were not audio-recorded, and PCPs had the opportunity to read the questions along with the interviewer”.

Reviewer’s Comment 3
Authors should list the reasons of non-inclusion of the 45 excluded PCPs. (Declined to participate \( n = ? \), Others reasons…)

**Authors’ Response 3**

Thank you for raising this point. The 45 PCPs who were not included in the study were absent from their work place when the interviewer visited. A phrase has been added in the manuscript in this regard as one can read on page 4: “There were 111 PCPs currently working in the region at the time of the study, of whom 66 responded to our inclusion criteria, the rest being absent from their work place when the investigators visited”.

**Reviewer’s Comment 4**

Authors should explain why they choose to dichotomize the ages with cut-off at 35 years. Same comment for duration of practice (10 years) and number of patients seen per day (10 patients/day).

**Authors’ Response 4**

Thank you for this concern. In fact, these dichotomizing thresholds were chosen on the basis of other studies that have sought PCPs attitude towards the management of chronic non-communicable diseases, including those of Noubiap et al. and Jafar et al. (1,2).


**Reviewer’s Comment 5**
What is the specialty of physicians who were not GP? I think this is important to specify. Among those who were not general practitioners, were there no specialists in internal medicine, endocrinology or any other subspecialties of internal medicine, for example? These physicians may be more skilled than others (generalists and others specialists) in the management of patients with diabetes. If you can provide this information, please integrate it in the analysis of the influence of background on the management and diagnosis of diabetes.

**Authors’ Response 5**

Thank you for these questions and suggestions. Physicians who were not general practitioners were: a surgeon, a gynecologist-obstetrician, an internist, a pneumologist, a pediatrician and five public health specialists. This information has been added in table 1. Overall, there were just two internal medicine specialists with no endocrinologist. Unfortunately, due to this very small number, we found it not relevant to search any influence of their background on diabetes management compared with the rest of respondents.

**Reviewer’s Comment 6**

Regarding initial evaluation by physicians, I have a concern. Is the request for examination is not influenced by several factors external to the doctors? I think this can be influenced for external reasons to physicians. 1) Physicians may be influenced by the financial resources of the sick, and so prescribe few exams to patients with limited financial resources. 2) Some doctors could only prescribe exams available at the health
center, knowing that patients would not have easily had access to these examinations. Please consider these for discussion.

**Authors’ Response 6**

Thank you for this concern. In accordance with it, we have added some elements in the discussion section as one can read on page 9: “This could perhaps be justified by the fact that many primary care clinics of the West region of Cameroon are ill-equipped and do not permit to have all the required exams performed in situ, precluding thereby PCPs from an exhaustive work-up. Additionally, PCPs may be influenced by the financial resources of the patient, and so will prescribe few exams to patients with limited financial resources”.

**Reviewer’s Comment 7**

Please precise methods used for multivariate logistic regressions. Stepwise forward? Stepwise backward? Entry in all variables block? If stepwise, what are entering p value in the model and suppression p value from the model of multivariate analysis?

**Authors’ Response 7**

Thank you for these questions. Stepwise forward was the method used for multivariate logistic regressions. We considered in the model all variables with a p value < 0.25 in the univariate model. A sentence in this line has been added in the revised manuscript as one can read on page 6: “Multivariate logistic regressions used the stepwise forward method, and only variables with a p value < 0.25 in univariate analyses were introduced in the model”. Table 4 was added to present the odds after adjustments.
Reviewer’s Comment 8

Authors should consider in the discussion section that the reference of diabetic patients to the nutritionist may be influenced by its availability. In the Cameroonian context, in primary care setting, it is possible that there are very few nutritionists.

Authors’ Response 8

Thank you for this suggestion. Although it is true that the reference to the nutritionist may be determined by its availability especially in primary care settings where they may be lacking, we preferred not to elaborate on that, considering that apart from table 2 which mentions how many PCPs used to refer their patients to the nutritionist, this result is not presented elsewhere in the manuscript. Besides, we think that it is not of great importance in primary diabetes care to refer a diabetes patient to the nutritionist. PCPs must be capacitated, due to lack of human resources, to address an adequate counseling regarding the nutrition of a diabetes patient.

Reviewer’s Comment 9

Page 6/Line 7. Please replace “qualitative” by “categorical”.

Authors’ Response 9

Thanks for this suggestion. The replacement has been made accordingly as it reads on page 6: “The Chi-2 test was used for categorical variable comparisons”.

Reviewer’s Comment 10

Authors’ Response 10

Thank you for this suggestion we have taken into account as it reads on page 6: “Data analysis used Statistical Package for Social Sciences (SPSS) version 20.0 (IBM Corp. Released 2011. IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp.).”

Reviewer’s Comment 11

Page 6 / Line 27. Please correct “25 (37.9)” to “25 (37.9%)” and “18 (27.3)” to “18 (27.3%)”.

Authors’ Response 11

Thank you for raising these mistakes we have corrected as it reads on page 6: “Only 25 (37.9%) PCPs gave the right threshold of PPG to define DM, and 18 (27.3%) participants knew what was the exact level of PPG to define impaired glucose tolerance”.

Reviewer’s Comment 12

Page 10 / Line 31. Please for citation of Spann and colleagues, precise the region or country of this study.

Authors’ Response 12
Thank you for this concern. The country of this study has been added. It now reads: “The two main oral anti-diabetic drugs our PCPs used to prescribe were biguanides (77.3%) and sulfonamides (60.6%), this result being consistent with that of Spann et al. (54.1% and 53.3% respectively) in primary settings in the United States.”

Reviewer’s Comment 13

I suggest that authors use the Generalized Estimating Equations (GEE) to comprehensively evaluate the diagnosis and management of diabetes. The four elements used in Table 3 (“-incorrect definition of diabetes mellitus with regard to the level of fasting plasma glucose; -no recommendation of lifestyle modifications; -incorrect attitude Pendant diabetic patients 'consultation and -incorrect attitude When patients' glycaemia has-been normalized ”) can serve as score. Physicians will have a score ranging from 0 to 4 using the 4 items listed above, regarding the diagnosis and management of diabetes. This will allow authors to have a more comprehensive view of the problem.

Authors’ Response 13

Thank you for this suggestion. However, we found it preferable not to compile these variables into a single score. In fact, although it would permit to have a broader view of the problem, it will not permit to see the contribution of each of these items. Further, each of the items concerns a particular aspect, either diagnosis or management, hence we are not sure that compiling them into a score would be suitable.

Reviewer’s Comment 13

Authors can also perform other analyses without dichotomization of variables.
Authors’ Response 13

Thank you for this suggestion. We carried-out such analyses, but did not find any additive information, hence the results were not presented, considering besides that dichotomization is better to search for associations between variables.