Reviewer's report

Title: Factors associated with general practitioners' awareness of depression in primary care patients with heart failure: Baseline-results from the observational RECODE-HF study

Version: 0 Date: 27 Jan 2017

Reviewer: Eric MacLaughlin

Reviewer's report:

General Comments

The current paper describes the results of an observational study assessing general practitioners' awareness of depression in heart failure. A unique aspect of this paper is that the questionnaire included both somatic and psychologic comorbidities reflecting real-world practice, and used a new algorithm for assessing if depression exists. The summary conclusion from the research was that general practitioners (GPs) were not aware of depressive symptomatology in a significant proportion of their patients.

The information in the study and results provide some useful insight into the prevalence of depression in heart failure. That information is worth sharing with the scientific community given that a majority of general practitioners were not aware of depressive symptomatology within their patients. However, there are some major issues that need to be resolved: 1.) The algorithm used to define depression was not stated, nor does it appear to be validated (see comment below on page 7), 2.) The manuscript is lengthy with duplicative information presented in multiple sections (i.e. methods, results, discussion and tables/figures), 3.) The methods section needs to be restructured as it is difficult for the reader to follow. It starts with a general overview of what was done (page 6, lines 114-117), but then goes back and fills in the details, with some very important items left out (e.g., response rates; see below for more specific comments). 4.) The discussion needs to be restructured as it is very long and does not flow well. For instance, strengths and limitations should be moved later, after a discussion on how the results of this paper fit into the current literature and what is know on the topic (i.e., currently the strengths and limitations are close to the beginning after stating the primary findings of the study, some of which is redundant). 5.) Throughout the manuscript recommend considerable consolidation and evaluation of information to be more concise. There is a large number of subheadings included in both the methods and results sections. Recommend combining and consolidating paragraphs where possible, 6.) There are grammatical, punctuation, and syntax errors throughout that should be corrected.
Specific Comments

Abstract:

* Page 3, line 62-63: Abstract - Methods. It is not clear what "positive and negative, respectively" is referring to. What does this mean? What standardized tool(s) were used?

* Methods, 2nd sentence: Where all GPs for those patients included in the analysis interviewed?

* Methods: It is not clear what exact comparisons or relationships were assessed. Recommend including language regarding a brief review of the actual methods used in the study.

* Conclusion: Much too long for the abstract. Recommend a one or two sentences concise conclusion, and utilize space freed up here to expand the methods (see comment above).

Background:

* Page 5, first paragraph: The standard abbreviation for heart failure is "HF", and should be defined first before using, and used consistently throughout the rest of the document. "CHF", which has historically been referred to as "congestive" (vs. "chronic") is no longer the preferred terminology, as patients may have HF in the presence or absence of congestive symptoms.

* Page 5, line 91: Sentence reads odd with ", 55% severely." Recommend rephrasing.

* Page 5, line 94: Stay consistent with use of apostrophes after "patient" throughout the manuscript. Some instances are inappropriately pleural.

* Page 5, line 98: Rephrase sentence starting with "this", as it is an unclear antecedent (reader is not clear what "this" is referring to).

* Page 5, line 109-111: Recommend rephrasing last sentence to be a clear statement of specific aims rather than worded as two questions.
Methods:

* Page 6, line 122-123: Should include the response rate, which appears to be 6.7% (293/4420).

* Page 6, line 123-124: As this sentence reads, it appears that GPs were first invited to participate, and then if they agreed, they would then send out letters of invitation and the questionnaire to all HF patients in their practice? Is this correct? If so, recommend rephrasing this sentence to clearly state that. Also, there should be data presented as far as how many invitations when out, how many were accepted (e.g., response rate). It would appear that this information is in Figure 2, but may provide a brief summary of this figure in the text, considering the figure is very large.

* Page 6, line 134: "Burnout" is a colloquial term. Rephrase or put in quotations.

* Page 6, line 135: Change "applied" to "used."

* Page 7, lines 140-155: It is not clear to me if the case-finding algorithm used was a validated measure to assess for the diagnosis of depression. From a statement made on line 150, it would appear that it has not, since a reference is made to a paper that has been submitted and is under consideration and BMC Fam Pract). There were also several abbreviations used that were not defined (e.g., DSMI-IV, PHQ, HADS-A, PROMIS).

* Page 7, line 140: Change "had been" to "was"

* Page 7, line 147: Define "ROC" first before using abbreviations.

* Page 7, line 148: Include city and state of the "R" statistics program in parenthesis after indicating the program used. May also remove this statement if not necessary. See comment below related to statistics.

* Page 7, line 150: An appropriate reference will be needed for this statement (published in peer-reviewed literature).

* Page 7-8: "Definition of depressive symptomatology in main study": This section is difficult to follow. The reader needs to go back and see what the various "criterion" mean. Suggest defining after the criterion is stated. For instance, state "All patients with a valid criterion 2
It is still unclear to me if the statements made about "valid" criterion are accurate if the algorithm applied has not been validated and published.

* Page 7, line 161-162: Recommend descriptions of P(+) and P(-) in the text be abbreviated since this information is provided in Figure 1.

* Page 8, line 165-166: Consider rewording (the word "select" was used twice)

* Page 8, line 171: Move period inside the quotation marks.

* Page 8, line 173: Write out numbers 1-10 (i.e. "three")

* Page 8, line 179: Insert "and" before the last item in the list.

* Page 183-185: This sentence is worded oddly. Were the GPs asked to provide a list of all additional diagnostic codes, by both ICD and WHO criteria? Also, need to state the specific ICD version used (assume 9th?).

* Page 8, line 184: Define "WHO"

* Page 9, line 203: A citation is needed for this statement.

* Page 9, line 203: Change "this" to "these"

* Page 9, line 204: What is being referred to in the phrase "in contrast to these studies"? Citation(s) are needed if the authors are comparing their study to others.

* Page 10: Earlier the authors stated that they used the statistics program "R" for the substudy. If the substudy was from the same cohort, this seems a little odd. May consider removing this information from above.
Results:

* Page 11, line 235: As noted above, it is not clear what the +/- designations are specifically referring to (e.g., algorithm defined depression vs. depression per the GP).

* Page 11, line 238: Typo (should be 64.9%)

* Page 11, line 243-255: It would appear that this information is duplicative as it is discussed in both the results and discussion. Recommend revising and/or removing as appropriate.

* Page 11, line 252: Remove capitalization of "symptoms"

* Page 11, line 257: Write out numbers beginning a sentence or reword entirely

* Page 12, line 266-277: What is the purpose of including two separate models (patients and patients + GPs)? The results (p-value/OR) seem very similar. May consider removing Model 2 as it does not appear to add to the findings. See comment below under Tables.

* Page 13: Correct typo in table footnote ("association" misspelled).

Discussion:

* Page 14, Limitations: There are 2 rather large limitations that were not addressed. They include the relatively low response rate and the fact that some analyses relied on GP interviews, which are subject to significant problems such as recall errors.

* Page 15, line 324: The statement "a systematic review" is confusing as written. Do the author's mean that a systematic review found that 13-48% of patients with HF also have concomitant depression?

* Page 15, lines 338-342: These sentences, as structured, are unclear and hard to follow with grammatical errors.

* Page 16, first sentence: Recommend to consolidate sentences to be more concise.
* Page 16, line 351: Confusing verb choice and text as written. Recommend revising.

* Page 16, line 352: The line starts with "(2)." Please correct/revise.

* Page 18, lines 398-401: Suggest cutting discussion regarding the association between the number of contacts and recognition of depression. The OR is very close to 1, which seems consistent with other studies, and therefore it is not clear if this adds important information.

* Page 18, line 413: Place in-text citations in numerical order.

* Page 19, lines 432-434: Recommend revising statement as it appears to be self-contradictory. The authors state it is "critical" to routinely screen, but then in the same sentence appears to contradict that by stating in increases the risk of fals-positive rates and overtreatment.

* Page 19, line 436: Fix grammar.

* Page 20, lines 450-451: The statement about "gold standard" does not make sense. If there is a "gold standard", then by definition, this is not something each GP decides to "choose carefully" for themselves. Revise statement.

* Page 20, line 456: Insert a reference at the end of the sentence referring to the Koenig et al. paper.

* Page 20, line 457: There is a reference to a paper by Weel. Was this an opinion piece, letter, review, evidence-based guideline? The authors' provide no context to the statement made that a GP's professional judgment is better than "guided care" (which is also not defined). Please revised this section.

* Page 21, line 473: Rephrase sentence and remove "anamnesis" as this is not a standard phrase for US readers.

Conclusion:

* Page 21, line 476-477: Consider revising, odd word choice.
Figures/Tables:

* Table 1, Page 9: The designations of P+/+, +/-, etc. are very difficult to follow in this table. A footnote is needed to define what each designation means. Does the first "+" indicate that the patient had depression according to the GP, or is it depression according to the algorithm? What about the second "+" or "-"?

* Table 3, Page 12: See comment above regarding possibly removing "Model 2." Suggest renaming column header as simply "Patient Characteristics" and drop then drop the label "Model 1" as there would be no need. If both Models are retained, remove the definition of the models from the table title and the column headers, and move the definition as a table footnote.

* Table 2, page 28: This table is very large, with an enormous amount of data. While patient characteristics are necessary to include in the paper, there are so much data in this table that the reader gets lost. Recommend revising table and either condense the the number of columns and/or remove some of the rows that are non-essential (e.g., living situation, employment, health insurance).

* Table 3, Page 12: For all variables that had a reference "(reference: male)," suggest revising/simplifying by removing the word "reference" to make this easier to read and avoid redundancies. For instance, "sex (female)", "living situation (alone)", etc.

* Table 3, Page 13: Typo in table legend "association"

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

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