Reviewer’s report

Title: General practitioners' awareness of depressive symptomatology is not associated with quality of life in heart failure patients - cross-sectional results of the observational RECODE-HF Study

Version: 0 Date: 13 Jul 2017

Reviewer: Susan Smith

Reviewer’s report:

Thank you for asking me to review this paper. It presents a further analysis of cross-sectional results of the RECODE-HF study. A related RECODE-HF paper has just been published in BMC Family Practice (ref 9) and I was the handling editor, whereas I am acting as a peer reviewer for the current paper. The two papers are related with the first one describing GP awareness of depression in their heart failure patients and GP factors associated with this awareness. This paper examines the measures taken by GPs in patients described as having depressive symptomatology. It also examines the link between patient HRQoL and GP measures taken I have some major concerns about the paper as follows:

* I have a fundamental problem with the grouping of patients who have a clinical diagnosis of depression with those who screen positive for depression symptoms into a group called 'depressive symptomatology P+. the authors justify doing this on the basis of a PPV of 68.8% for an algorithm combining PHQ9 scores and HADs scores. This group is then further divided into P+/+ if GPs say they have current depressive symptomatology or P+/- if they don't have this symptomatology based on telephone interviews with GPs. Multiple comparisons are then made between these groups and about treatments offered to each group and differences in GPs reported treatments and patient reported treatments. Clinically there is a significant difference between a patient coded/ treated with a depression diagnosis and those who may screen positive at a point in time. At the very least it needs to be clear as to which of the P+ group have an actual diagnosis vs screen positive. The authors do acknowledge some of these fluctuations and that some of those who are diagnosed and treated may not even by picked up by an algorithm based on symptom screening if they are successfully treated.

* The terminology is very hard to follow - see labels in Table 3. Presumably 'apparent depression' means a depression diagnosis? It would be much clearer if was based on depression diagnosis vs depression symptoms. If definite depression diagnosis not known based on how data was collected, could at least use different cut-points in the scores.

* It is unclear how the GP responses were collected on the telephone - did they have the patient record in front of them so that they could answer based on this rather than on their own recollections?

* The HRQoL analysis is all based on use of the EQ5D VAS alone. The EUROQOL group state on their website that it should not be used isolation, as it is normally administered with the
full questionnaire. (https://euroqol.org/eq-5d-instruments/eq-5d-5l-about/faqs/). I am not even sure what it really adds anyway. The authors would need to justify why they chose this measure in the introduction and what is the known link between EQ5D scores and both HF symptoms and depression. In the discussion they suggest that GPS should also target HRQoL as well as HF symptoms and depression - how would they do that? I would suggest removing the HRQoL elements altogether.

* Authors should provide a STROBE checklist and deal with the issues around potential selection bias etc

* Could there have been any clustering effects at GP level - would be good to provide number patients per GP - did the GP answer set questions about each of their patients in the study?

* Confounders in regression models should be presented in the methods, not in the results, with more consideration given as to how they were chosen. Any consideration of socioeconomic status etc

* Much is made of the difference between GP reported use of pharmacotherapy and patient report. Is it possible that patients significantly underreported anti-depressant use given their age and also the high comorbidity score and likely significant polypharmacy? Did GPs look at current prescription to give this answer as if they did it would seem to be more reliable.

* Overall the results aren't that surprising given that GPs were more likely to be aware of patients with higher depression scores and more likely to treat them. Overall in the group the GPs regarded as having depression there was high levels of intervention, though this could be a circular argument with GPs regarding treatment as a marker for depression when they reviewed the records. The discussion around access to psychotherapy is important as pharmacotherapy is often easier and more accessible in most countries.

* Would be good to know the definition of psychotherapy as well. In my setting patients could refer themselves for some types of psychotherapy such as bereavement services or support services for older patients.

* The data sharing statement seems unusual and may not be consistent with BMC Family Practice - while it is fine for a study group to keep data confidential while a study and related publications are underway, it would be better practice to indicate plans for data sharing on study completion

**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.
Yes

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