Author's response to reviews

Title: General practitioners' reasoning when considering the diagnosis heart failure: A think-aloud study.

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I hereby submit our revised manuscript MS 1748679267460739 - General practitioners' reasoning when considering the diagnosis heart failure: A think-aloud study.

Our comments to the suggestions and questions from the reviewer are listed below. I hope you will find them satisfactory. When formatting the article, we found that one table (Table 2) was too large to be transformed into portrait-format, and we have therefore chosen to put it as an additional file and renumbered the other Tables accordingly.

Yours sincerely

Ylva Skaner

Minor essential revisions - author can be trusted to correct

References to page numbers refer to the original manuscript.

Comments on point 1

How arguments for and against CHF were analyzed and compared against guidelines. We have added a new sub-section in the Method section, with the heading "Comparing think-aloud protocols with guidelines", where we have tried to explain this better. The details about appropriate symptoms and signs were moved from the Background section, in the middle of page 5 to this paragraph. This sub-section is inserted on page 10, above "Classifications of diagnostic judgements".

Comments on point 2

a) GPs do not use clinical signs and symptoms as per guideline. A new paragraph commenting the use of symptoms and signs has been inserted in the Discussion section, under the sub-section "GPs' diagnostic reasoning compared with guidelines", on top of page 16. A sentence mentioning the use of symptoms and signs has also been inserted in the Conclusions, on page 18.

b) ...they tend to rely on "patients scripts"
See below, under point 3.

c) A substantial minority do not draw on ECHO information. This has been commented upon in the Discussion section, in the first paragraph under the subheading "GPs' diagnostic reasoning compared with guidelines (page 15), and under the subheading "some implications of this study" (page18), as well as in the Conclusions (page18).
d) Guidelines provide inadequate information of diastolic CHF. This has been commented upon in the Discussion section, under the subheading “some implications of this study” (page 18), and in the Conclusions (page 19). It was now also added in the Conclusions in the Abstract.

Comments on point 3

I do not agree that the observation that GPs use "patient scripts" [...] to diagnose heart failure implies that this information should be included in guidelines.

The concept of illness scripts is described at page 16, the lower half of the first paragraph. In the last sentence of this paragraph we argued that this kind of information ought to be included in a clearer way in the guidelines because a) it would reflect the higher probability of patients with those characteristics, and b) because it would be in better agreement with the GPs' thinking.

We have omitted the second part of this argument (agreement with GPs' thinking) from the text, since we agree that it might be too speculative - specific research on the correspondance between guidelines and the doctors' thinking will certainly be needed. However, enabling factors in most cases do reflect a higher probability of a specific diagnosis in patients with those characteristics. In the case of CHF, the information that a patient has had a myocardial infarction has a high positive predictive value (and in conjunction with a cardiac enlargement was the best predictor of CHF in a primary health care study, according to our Reference n:o 23). This is described elsewhere in the guidelines, but it could be useful to integrate it in the list of assessments (Table I) as a piece of information that would support the diagnosis CHF.

In the last sub-section in the Discussion section (Some implications..., page 18) we have also changed the second last sentence accordingly.

In the Conclusions, the sentence dealing with this (“Information about other relevant diseases was frequently used in the GPs' diagnostic reasoning, but this was not included in the recommended diagnostic assessments in the guidelines.”), the last part was changed to: "..., indicating that they often relied on illness scripts."

Comments on point 4

About the last sentence in the first paragraph of Results. The sentence refers to the diagnostic judgements, and not to the content variables. The two raters first made their interpretations of the diagnostic judgements and classified them, and then the interrater agreement was calculated. After that, the seven diagnostic judgements where the raters interpretations differed were discussed separately, and it was possible for the two raters to agree upon an interpretation.

We think that the meaning might be clearer if we add "diagnostic": "For the few diagnostic judgements where there was initial disagreement, it was possible to agree upon an interpretation."

Discretionary revisions - author can chose to ignore

Comments on point 5

a) GPs do not consistently consider symptoms and signs as entry criteria for the CHF diagnostic algorithm. See point 2 (a) above, under Minor essential revisions.

b) I do not agree that the observation that GPs use "patient scripts" [...] to diagnose heart failure implies that this information should be included in guidelines. See points 2 (b) and 3 above, under Minor essential revisions.

c) GPs tend to over-diagnose CHF. The authors reflections on this in the light of the study findings. This has been commented on in the last five lines on page 15. We have also expanded the first paragraph under the sub-section "Some implications of this study" on page 18 to make this point clearer.