Author's response to reviews

Title: Validating the Johns Hopkins ACG Case-Mix System in Swedish primary health care.

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Author's response to reviews: see over
To the editors  
BMC Public Health

Dear Sir,

Thank you for considering our manuscript which has been retitled: *Validating the Johns Hopkins ACG Case-Mix System of the elderly in Swedish primary health care* (ID:8598688996185326) after revision for evaluation of publication in BMC Public Health.

All the reviewer’s valuable comments and suggestions have been taken into consideration. How we have considered and acted on the comments is shown in detail below. We hope that you by this will find our manuscript suitable for publication in your journal.

This manuscript has neither been published nor is it currently under consideration for publication by any other journal. None of the authors have any conflicts of interest regarding the publication of this manuscript. All authors have read the final revised version of the manuscript and agree on its publication.

Yours Sincerely,

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Answers to reviewer 1: Barbara Starfield

1. In the title ‘of the elderly has been added’.

2. Last word ‘comorbidity’ in abstract has been changed to ‘use of resources such as medications’.

3. In sentence 8 of Background; ‘for management of clinical care’ has been added after ‘planning’. In sentence 9 ‘chairs’ has been substituted with ‘providers’.

4. I was not able to find ‘is an individual based condition’ and think the reviewer referred to ‘is an individual based system’ which was changed to ‘uses the individual as the unit of analysis for clinical and population purposes’.

5. Background, second paragraph has been changed to ‘Polypharmacy [8,9] is associated with treatment of multiple chronic conditions and represents the patient’s doctor….’.

6. In independent variable comorbidity the sentence has been changed to ‘Thus each ACG describes patients with the same type and degree of comorbidity’.

7. Spelling of ‘continence’ has been corrected.

8. Has been changed to: ‘The study comprised the first’.

9. Has been changed to: By adding information on the biologic severity of the diagnoses, the individual’s….

10. Has been changed to: The variance in health care cost explained by the Johns Hopkins ACG Case-Mix system in a Canadian and Spanish study was larger…

11. ‘identifies’ has been changed to identify.

12. Has been changed according to reviewers advice.

13. …’of health and functioning’ has been added to the last sentence of Conclusion.
Answers to reviewer 2: Rumana Omar

1. Totally 2312 residents of the Karlskrona community were invited to participate in the SNAC-Blekinge baseline study 2001-2003. The participants were randomly sampled in age stratas from the national registry in the age groups 60, 66, 72, 78 and 81 years. In the age groups 84, 86, 90, 93 and 96 years all inhabitants of Karlskrona community were included. The data has been recalculated using sampling weights [pweight=1/prob]. The first part of methods (p 4) and results (p8) have been rewritten to describe the sampling method and the studypopulation in more detail. The tables have been corrected using the recalculations with sampling weights.

2. A brief description of the alpha command and a reference to a published paper has been added to the first section under covariables (p 6). The previous reference was from the Stata Technical Bulletin, which now is the Stata Journal that is indexed in the Science Citation Index, but I have followed the advice of the reviewer and omitted it.

3. The SCB questionnaire has been developed by Statistics Sweden and used in: Surveys of Living Conditions in Sweden (ULF) and has been used in unaltered condition in our study. I have not been able to get information that it has been validated in a published paper. The Ware protocol used in this study has been put together by Professor of Psychology Bo Hagberg from questions mainly on future health from a larger validated protocol that is described in reference 19 (Ware JE. Scales for measuring general health perceptions. Health Serv Res 1976;11: 396-415.) The fourth paragraph on (p 7) has been rewritten to reflect this.

4. In table 2 (of the previous version of the paper) the number of participants with missing values for predictors increased as more variables were added due to missing values for some predictors mainly from the self-administered questionnaires in contrast to IADL which was registered by a research nurse. Table 2 has been provided to show % of missing values in the different predictors with respect to gender and age.

5. The models have been recalculated using only participants with complete data sets (n=1144). The paper has been corrected after these recalculations (abstract, results, discussion, tables).

6. I thank the reviewer for the information. The Hosmer-Lemeshow test has been used to calculate goodness-of-fit and the results are shown in table 4. The last sentence on (p 8) and a sentence on line 11 of (p 9) have been added to comment on the results.

7. A detailed description of participation rate in different age groups has been added to the first part of results (p 8). Participation rate dropped markedly with age. Age has now been included in the models.
8. In the revised article model D corresponds to model C in the previous version of the article (table 4). A new model E that consists of model D but excludes RUB has been added to table 4 to show the usefulness of RUB in predicting the outcome.

9. The pages of the manuscript are now numbered.