Reviewer's report

Title: Correlation between Patients' Reasons for Encounters/Health Problems and Population Density in Japan: A Systematic Review of Observational Studies Coded by the International Classification of Health Problems in Primary Care (ICHPPC)" and the International Classification of Primary Care (ICPC)

Version: 0 Date: 28 Dec 2016

Reviewer: Jean Karl Soler

Reviewer's report:

Title: Correlation between patients' reasons for encounter / health problems and population density in Japan

Decision: major revision

I enjoyed this article, and would recommend its acceptance, but only after a major re-write.

I would make the following suggestions for changes:

1. On page 6, last paragraph, the authors claim that there is no published data on health problems specific to primary care physicians. I am under the impression that at least one study has collected data on all health problems managed in a small sample of clinics over a three year period (Yamada et al)

2. Methodology, page 12. What is the validity of the division of health problems and RFEs into internal medicine and non-internal medicine issues? In the first case, should it not be a division between primary care and non-primary care problems/RFEs, and then all the codes in ICPC would refer to primary care concepts. As such, why exclude areas such as mental health problems, pregnancy, skin, musculoskeletal, etc. from a study of primary care RFEs and health problems? Secondly, has this approach been used before, and if so, has it been tested for validity? So, for example, warts (skin) is not a problem which cannot be managed in primary care. So why is it judged differently from, for example, a blood disorder such as anemia? In the third instance, can you divide this cleanly across chapters? So then lymphoma is an internal medicine (or primary care) problem, but an ankle sprain is not?
3. On page 16, Table 5, the study period definition probably contains an error (see last line: ">1 year and <1 year"?)

4. On page 19, last paragraph, the statement that all studies were of insufficient quality and sample size is an oversimplification and cannot be made without justification. I cannot agree with this statement. The statement (same paragraph) that coding is only valid when performed independently by multiple coders is wrong. Clinician coding at the point of care is an extremely valid process, as long as the clinicians are appropriately trained and motivated.

5. Page 20, first paragraph. The coding with ICPC and ICHPPC are very well described in books published for that purpose by Wonca, and one cannot state that the coding method and process is not well described if such books have been referenced and their methods followed.

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

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

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics
Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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