Reviewer’s report

Title: Active listing and more consultations in primary care are associated with reduced hospitalisation in a Swedish population.

Version: 0 Date: 20 Dec 2016

Reviewer: Gregoire Mercier

Reviewer’s report:

Manuscript Number: BHSR-D-16-01218

This manuscript presents an original study aimed to assess the association between two primary care traits (active listing and number of visits) and hospital admissions in a Swedish county in 2007. Avoidable hospital admissions, also referred to as admissions for ambulatory care sensitive conditions and potentially avoidable hospitalizations, are routinely used by policy makers internationally since they might be at least partly avoided by timely and effective use of primary care. As such, it is a recognized indicator of access to primary care, usually measured at the population level, and provided that socio-economic and epidemiologic factors are appropriately accounted for. Understanding the drivers of avoidable hospital admissions, and in particular the role of primary care, is therefore of high interest to policy-makers worldwide.

Hence the manuscript addresses a very relevant issue. Unfortunately, there are some major issues and we therefore recommend major revisions.

Major comments:

The aim of the study is to assess the association between primary care and hospitalizations. To that end, the concept of hospitalizations for ambulatory care sensitive conditions has been coined at the end of the 1990s along with various definitions based on lists of diagnosis codes applied to hospital discharge data. The first major issue is that the author did not use any of the existing definition; instead, they regarded all admissions as potentially explained by primary care, which is unfortunately not true. We therefore recommend using one of the existing definitions: the first one proposed by Weissman et al. in 1992, the American one (AHRQ) or the European one (Thygesen 2015).


Likewise, the existing literature on the topic is not adequately cited, both in the introduction and in the discussion. In a way, the authors did not adequately summarize the available evidence on the topic and put their own work into perspective. For instance, the following recent publications are of utmost importance:


The second major issue pertains to the statistical method used. Apparently, the authors used data aggregated at the municipality level and thus implemented an ecological-level analysis (see line 170). However this is not clearly stated. If this is the case, they should provide at least the number of municipalities involved in the analysis, their size and characteristics.

Minor comments:

Abstract:

Regarding the main results (i.e. odds for hospital admission and mean days hospitalised), we recommend adding either p-values or 95% confidence intervals.

Title:

We recommend specifying the setting (i.e. Sweden) in the title.

Manuscript:

Line 88: Since some patients are actively listed and some others are not, it is important to know what drives a patient's decision to do so. In particular, is there any educational, social, cultural, geographic or economic determinant that might be a confounder in the forthcoming analysis?

Line 112: The proportion of people excluded for missing data is not clear. Please provide it. Additionally, I would recommend a brief comparison between the people included and the one excluded to check any difference in terms on active listing and hospitalisation.

Line 131: Please provide references for the conceptual model (Figure 1) and, if possible, refer to already published ones such as Ozegowski S, Sundmacher L. Understanding the gap between need and utilization in outpatient care-the effect of supply-side determinants on regional inequities. Health Policy. 2014 Jan;114(1):54-63.

Line 144: The first sentence is incomplete (missing verb).

Lines 144-150: This paragraph should be placed in the conceptual model.

Line 174: Please explain how the variables entered in the multivariate models were chosen.

Line 187: Please give some descriptive statistics from Table 1 beforehand.
Table 1: Please add subtitles to make the reading easier. For instance, 'Listing', 'Number of consultations', and so on.

Table 2: Please erase the vertical line.

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.

Yes

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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

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Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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