Reviewer’s report

Title: Compliance with referrals to medical specialist care: patient and general practice determinants: a cross-sectional study

Version: 1 Date: 04 Dec 2015

Reviewer: Andreas Sonnichsen

Reviewer's report:

The manuscript significantly improved, and I only have a few further suggestions.

Methods:

Please provide a reference showing that the NIVEL-GPs are representative of all Dutch GPs regarding age, gender, etc. (p.5, l. 31-35).

The sentence p. 6, l. 15-19 is misunderstanding:

You are saying in line 9 that VEKTIS collects DRGs claimed to all health insurers. Then you continue: „medical specialists can claim their services to the patient's health insurer“. Does this mean that the specialist can claim also directly to the health insurer without using vectis? If this is the case, you will miss referrals and underestimate referral compliance.

P. 6, l. 40/41: The inserted phrase is not understandable to me. Do you mean that for less than 50% of the patient-physician encounters a diagnosis was provided?

I suggest that the examples given are expressed negatively - corresponding to the reason for exclusion (e.g. less than 46 weeks of contact data instead of minimum of 46 weeks of contact data).

P. 6, l. 48/49: How do you know that referral data are incomplete, if a GP refers less than one patient per week to a specialist? Or the question put the other way around: How do you know that referral data are complete if there is at least one referral per week? Is this methodology valid?
P. 6, l. 52/53. Please insert the reason you provided in your response letter in the manuscript as it is not known to the reader that capitation fees in the Netherlands differ between regions according to degree of deprivation.

P. 7, l. 9-16. I am still not convinced. The reference given (12) was not accessible to me or at least I didn't find it. Instead I found the "Cijfers uit de registratie van huisartsen - peiling 2010" which probably resembles reference 12, only for 2010 instead of 2009. It describes the practice characteristics of the NIVEL-practices. I couldn't find a comparison of NIVEL practices with all GP practices in the NL. Please provide the website or access to reference 12. (This also applies to the other NIVEL-references).

The authors should show that their sample of practices is representative of the NIVEL-practices and that NIVEL-practices are representative of all NL-practices. If these data are not available, the assumptions and conclusions presented in the paper cannot be made and this should be discussed as a limitation.

Results:

p. 10, l. 25. Please provide the total number of referrals analyzed, otherwise the percentages are meaningless. I assume it is the sum of all referrals depicted in table 1?

p. 10, l. Please provide the absolute numbers of referrals for symptoms and referrals for diseases.

Discussion:

p. 11, l. 31ff. I still believe that the uncertainty regarding the question whether the study sample is representative of all Dutch GPs is unsettled. This should be discussed in the strengths and limitations section, not only the difference in practice type, but also other possibly not measured characteristics. Also, the limitation that quite a large number of practice years had to be excluded due to incomplete data, needs to be mentioned.

P. 13, l. 10-15: The increased odds ratios for referral compliance in patients with one or more chronic conditions is a result and should be provided in the results section, if the authors consider this result to be relevant. 95% CIs of these odds ratios should be provided. It should then be discussed, though, why the authors consider this important inspite of the fact that these odds
ratios are nonsignificant in the multivariate models that include age (table 3). From the results presented in table 3 there appears to be no age-independent association between referral compliance and the number of chronic conditions. As there is a known correlation between number of chronic conditions and age, an independent association between chronic conditions and referral compliance does not seem to be necessary to support the hypothesis that older people may comply more because they don't have to pay the deductible.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

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

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Acceptable

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