Reviewer's report

Title: What aspects of quality of primary care predict emergency admission rates? A cross sectional study.

Version: 2 Date: 6 August 2012

Reviewer: Felix Greaves

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General comments:

This study is a regional, observational study of the characteristics of general practices in Northamptonshire (including demography, access and clinical quality), and how these characteristics are associated with emergency admission rates to local hospitals.

My general comments include that the papers is well written, there are good explanations of technical issues where needed and largely short, clear sentences. There is a clearly described method and information on source of data; the statistical methods seem to be appropriate to explore the relationships between a number of practice level variables at an ecological level.

The paper reinforces findings which have been shown before, particularly around the effect of deprivation, gender and age on emergency admission rates. The paper claims novel findings around the relationship between emergency admissions and being able to book an appointment with a preferred doctor, which they find was stronger in less deprived communities.

NB- I am not able to see one line of text on page 4 as it is covered by a text box, so could not make a judgement on that short section.

Major revisions:

One concern is about the strength of the conclusion drawn on the basis of the observed analysis. The conclusion is phrased strongly- “that those practices with more patients who were able to book with a preferred doctor reduced emergency admissions” implying a causal relationship that a simple association might not guarantee.

The paper does not set out a clear hypothesis to test in the introduction, rather it describes a number of previously observed associations, and then sets out an exploratory rather than hypothesis focused agenda. As a consequence, I think that an appropriate level of caution needs to be expressed when describing the nature of associations demonstrated.
Discretionary Revisions

The QOF is referred to as the quality outcomes framework (page 4), where it should perhaps be the quality and outcomes framework. As ever, there are limitations to the use of combined QOF scores as a measure of clinical quality, significantly in the lack of variation measured by the overall clinical point score, with a narrow interquartile range demonstrated in Table 1. The paper might benefit from acknowledging the limitations of overall QOFs scores in the discussion section. They also do not mention in the discussion the literature that looks at condition specific quality metrics and unplanned condition specific admissions, which touches on the findings of this paper (for example: Dusheiko M, et al. Does higher quality of diabetes management in family practice reduce unplanned hospital admissions? Health Serv Res. 2011 Feb;46(1 Pt 1):27-46).

As an ecological study, I feel that an acknowledgement of the possibility of ecological fallacy using these data might be sensible.

Although some of the limitations of a local area study are mentioned, it might also be useful to consider the effect of local GP patients who choose to leave the era for secondary care. The study says that 84% of admissions were to the two hospitals in Northampton, suggesting that 16% of admission are elsewhere and unaccounted for- introducing potential biases. In the further research section it might be worth asking whether the observed relationships here, in particular those with specific measures of access, hold at the national level.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests