Reviewer's report

Title: Primary Paediatric Care models and non-urgent Emergency Department utilization: An area-based cohort study

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Reviewer: K J Kelleher

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This manuscript presents the results of an analysis of encounter data for Italian children under age 6 in the emergency department (ED). The authors consider the role of type of pediatric practice (individual, group or network) on pediatric use of ED for non-urgent visits. The topic is timely in that health reform in the U.S. and elsewhere is increasingly focused on the structural and process aspects of primary care and their relations to costs and outcomes.

Several strengths are notable. In general, the manuscript is clearly written without excessive jargon. The analyses that are presented are appropriate for the type of data employed and clearly articulated. The authors considered the reliability of their results by presenting diverse models that include or exclude various types and times of ED visits. The review of practice structure on ED visits by children from the literature includes diverse articles from a variety of sources.

- Major Compulsory Revisions

First and most importantly, the study results and discussion are presented as if practice design 'caused' slight variation in non urgent ED visits among children. Although there is one sentence in the discussion noting that there might be a selection effect to individual, group or network practices because of patient choice, the authors dismiss that choice because type of practice is not an advertised feature. However, numerous authors have noted that neither clinician nor patient selection to practices is random and that patient treatments and use of care are often determined by prior patterns of use and management not included in this study. In other words, the assumption of an effect on use may be associated with practice type because of other variables such as history of prior use, parent anxiousness or unmeasured items. This is especially relevant given the uneven distribution of patients to different geographic areas since distance to care is also associated with ED use for non urgent cases.

- Minor Essential Revisions

Although the description of the three types of practices focuses on availability of clinicians in the three models, the manuscript hints that there might be differential access to electronic records and specialty relationships in some settings. More importantly, isolated rural solo practices in some areas can be overwhelmed with patient volume and encourage their patients to use the ED or even refer to the
ED for non urgent cases that might require considerable time on their part.

- Discretionary Revisions

One small note, on the ninth page of the manuscript, a percentage (28.7%) appears in an incomplete sentence. And finally, in the conclusion, the authors conclude that group does better than the individual but also says better than network which depends on the model cited.

**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.