Reviewer's report

Title: Out of hours care: A profile analysis of patients attending the emergency department and the general practitioner on call.

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Reviewer: Suzanne Richards

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Title of paper: Out of hours care: A profile analysis of patients attending the emergency department and the general practitioner on call.

Authors: Philips et al.

1. Is the question posed by the authors well defined?

The rationale and question are clearly defined in the introduction to the paper, although more description is required regarding service provision.

Minor essential revision: More detail describing precisely how GP out of hours care are accessed and delivered in Belgium would be beneficial in the methods (context subheading). This would allow the international audience to contextualized the findings more readily. For example, in the UK patients who call their GP surgery out-of-hours are automatically given the phone number redirecting them to the local, independent, out-of-hours primary care service (some practices automatically redirect calls as well). This service may be a GP (not-for-profit) co-operative or private (commercial) provider commissioned by the Primary Care Trust. When reaching the out-of-hours service, the call is then triaged by a clinician (generally a GP), who then decides on the management plan (phone advice, treatment centre visit, home visit, go direct to ED). How does the process work in Belgium specifically? Are there different models (you mention co-operatives in the discussion) or is it practice or practitioner based.

The ED model description is adequate, but not that different from most countries. In the UK, although patients have free choice regarding access to ED’s too i.e. although the GP can ‘gatekeep’ and refer people to ED – the patient can go directly to ED if they so wish.

2. Are the methods appropriate and well described?

Minor essential revision: The data collection methods need to be more clearly defined. How did the research team access details on patients seeking care from GP services to then telephone them to administer a questionnaire (particularly as the patient had not provided consent for the research team to access their records). What happened if the patient did not leave a telephone number? This method was different from ED departments. Can the authors be sure that all patients consulting at ED were offered questionnaires? Who asked the ED patient to complete a questionnaire – was it the clinician or a researcher?

Major essential revision: The analysis plan is unclear and requires amending. I was unclear whether or not the final model presented was univariate (as implied
on pg 7, final paragraph) or multivariate. My uncertainty arises, in part, as the results section describes (on page 9) the ‘best fitting model’ in which 11 independent variables were used – which implies an adjusted model. If the analysis was restricted to a univariate analysis, this weakens the paper considerably. I would recommend conducting a multivariate analysis prior to publication, as the authors have all the necessary data and can then present much stronger statements regarding predictors of service use. Some of the variables identified (assuming a series of univariate/unadjusted analyses were conducted) might then become non-significant as there is clearly potential for confounding relationships between variables such as country of origin, language skills, gender and even age (assuming migrants may be younger males).

I was also unclear regarding the dependent variable. Was it one variable with two categories (GP as reference category versus ED). This is important as the interpretation of the OR’s in the subsequent results and Table 4 are difficult without clearly understanding this. A little more information on how the patient characteristics variables were entered into the model would also be beneficial. For example, age was collected as a continuous variable, but it would appear that it was entered as categorical variable with three levels. How were these levels selected?

On page 12, first paragraph of the findings section you present an OR and CIs for males seeking help for minor trauma from ED departments versus females. I think this is new data i.e. not from Table 4 – and if so, this should be presented in the results section, before being discussed in the findings.

3. Are the data sound?

Major essential revisions

The results section was quite difficult to follow, as the authors present proportions without reference to frequency data in both the text and in tables. I recommend presenting % (n/N) wherever such data are reported. This is particularly important as in places, data are restricted to two of the four localities, and hence the sample available for analysis can vary dramatically for different comparators.

The data presented in Table 1 is difficult to interpret, and requires clarification. For example, the first data rows presents mean ages without information on variability (e.g. confidence intervals, or a standard deviation). The data do not require two decimal places. Some form of significance test has been undertaken (‘p<0.05’), but what was the comparator? Is it mean age in the two groups (ED versus GP), or % of refusers versus participants in the two groups compared? Similar comments can be made for subsequent rows of data. Please critically review this table and amend.

On page 9 the analysis of the proportion of patients who were subsequently hospitalized as a result of being taken to hospital by emergency services (e.g. ambulance) was reported as significantly higher than people who came via self-referral. As this analysis cannot adjust for underlying casemix/severity – is it really worth while statistically testing the observed difference?

Table 4: This table contains much redundancy. For example, Beta and SE are
not required (the odds ratio is simply the exponential of beta i.e. the same data, and the associated 95% CI of the odds ratio tells you all you need to know about variability). Drop Beta and the SE in favour of the odds ratio and 95% CI. Present frequency/proportion data in its place. For example, I would like to know the % (n/N) females consulting GP versus ED, and the associated OR and 95% CIs. Should the authors undertake multivariate analysis, both unadjusted and adjusted OR/95% CI data should be presented. I am sorry this feedback is a little unclear (it arises in part, due to my confusion regarding the analysis strategy), but all of it is couched in the assumption that this is univariate analysis. If this is an adjusted model, my comments would be different again, and I would be requesting likelihood ratio testing rather than presentation of waldtest data etc.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?

Much greater clarity of the analysis and results section is required.

5. Are the discussion and conclusions well balanced and adequately supported by the data?

I cannot make any firm recommendations at present, as I do not fully understand the analysis undertaken. I would be happy to comment once the analysis approach has been clarified.

6. Are limitations of the work clearly stated?

A range of limitations are clearly presented. However, if the modeling was restricted to univariate analysis, I would expect some rationale as to why this approach was undertaken.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?

Yes

8. Do the title and abstract accurately convey what has been found?

Title is accurate. Abstract may need to alter depending on analysis strategy.

9. Is the writing acceptable?

Mostly fine, although some minor editing of the English is required. For example, ‘data’ are plural not singular (e.g. data were, not data was etc). Given the recommendation for major revision, I have not provided this level of detailed feedback yet. However, I would be happy to comment more precisely on the revised text once it is closer to the finished article.

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

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:

I declare that I have no competing interests