Reviewer’s report

Title: Chronic-disease patients and their use of Out-Of-Hours primary healthcare: a cohort study

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Reviewer: Robert Ware

Reviewer’s report:

This is a review for the submitted manuscript “Chronic-disease patients and their use of Out-Of-Hours primary healthcare: a cohort study” by Flarap et al.

The researchers report information collected from out-of-hours calls to a primary care service, concentrating on the reason for the call, the chronic disease status of the caller, and how the call was handled. In total 15,229 contacts were analysed, and of these 4893 were from patients with at least one chronic disease. The researchers concluded that patients with chronic disease were more often managed by out-of-hours GPs than other patients were.

The study considers an important topic, and will interest readers who work with patients with chronic disease. However the manuscript would benefit from some refinement, in particular some added detail on patient characteristics.

Major revisions

None

Minor revisions

1. Title – the researchers call this a “cohort study”, but the usual definition of a cohort study is when an identified group of individuals are assessed at multiple time-points. This study should more accurately be described as a “cross-sectional” study (which is what the researchers call the study on the first line of the ‘Methods’ subsection of the Abstract)

2. Background – please define “OOH” (last line of first paragraph)

3. Background – why were the chronic conditions “chronic lung disease”, “chronic heart disease”, “sever psychiatric disease”, “diabetes” and “cancer” chosen for this study rather than other chronic conditions?

4. Methods – Design and Setting – why was the participation rate among GPs (55%) so low?

5. Methods – Design and Setting – 21457 contacts to the OOH were sampled, but what proportion was this of the total number of calls received in the study-period?
6. Methods – Data – were the RFE’s and diagnoses coded from the pop-up questionnaire answers? Or did coders access other information?

7. Methods – Statistical analyses – for a descriptive study of this nature it is usual to present data as “frequency(percentage)” rather than “percentage(confidence interval)”

8. Results – how many of the 21457 contacts were from individuals not eligible for the study (ie without a Danish identity number or from children)? What was the distribution of call from each individual (ie did many individuals make multiple OOH calls)?

9. Results – when reporting combinations of conditions please report percentages using total number of unique adults as the denominator – at the moment 21.0% of adults are shown as having both lung disease and diabetes, but I assume this is 21% of the adults with 2+ chronic conditions?

10. Results – the first sentence on page 8 should be rephrased – at the moment it reads as if the prevalence of heart disease among callers aged 75+ is 49.5%, but actually the data is saying the of the callers with heart disease, 49.5% of them were aged 75+

11. Results – the researchers say that fewer patients with diabetes were referred to a hospital admission due to an exacerbation compared with patients diagnosed with the other three chronic diseases – but there is no proof that the difference is significant. The researchers could find out if the difference was significant by running a series of multinomial logistic regressions and reporting the results in Table 3.

12. Discussion – the authors say the extensive data set provides relatively high statistical precision, but that is only true for some outcomes. For example if you look at the “n”s in Table 3 it is clear that the numbers are quite small (eg n=35)

13. Table 1 – please remove confidence intervals and present descriptive statistics as “frequency(percentage)”.

14. Tables 2- 5 – same comments as for Table 1

15. Tables 3-5 – please include the number of unique patients in a footnote for these Tables (currently just the number of telephone calls is displayed)

Discretionary revisions

None

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

Quality of written English: Acceptable
Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests