Reviewer's report

Title: Socio-demographic and clinical characteristics of re-presentation to an Australian inner-city emergency department: implications for service delivery.

Version: 2 Date: 17 May 2007

Reviewer: Jane McCusker

Reviewer's report:

General

This paper reports on a retrospective cohort study of people who made an ED visit over a 24-month period to an Australian inner-city hospital. The objective was to identify socio-demographic and clinical characteristics of patients who made a return visit to the ED within 28 days.

1) Background

a) The authors refer to previous research associated with frequent ED use and risk of hospital re-admission but do not differentiate between these two variables. The determinants of ED use with and without hospital admission may differ.

b) While much of the introduction addresses the issue of frequent ED use, the study focused on return visits to the same ED within 28 days.

2) Methods

a) The authors decided to include in the study, patients who were admitted to hospital, in addition to those discharged from the ED. The rationale for this is unclear. The authors say that ED and hospital length of stay are included as explanatory variables in the data analysis but it is not clear how. Did they examine, for example, interactions between the other predictor variables and hospital admission at the ED visit?

b) The study variables are not well described. The categories for the EMD displayed in Tables 3, 4 and 5 need some explanation for those not familiar with this system, for example, attendant source, discharge outcome. Consider creating some composite variables or collapsing some of the categories.

c) There is a lengthy section on data collection and classification regarding homelessness. It is not clear why this effort was not applied to other study variables (e.g., medical illness). If this was a variable of primary interest, this should have been specified more clearly in the Introduction. An extraordinary effort appeared to be devoted to this but with disappointing results in terms of inter-rater reliability. The lead abstractor apparently re-examined 80% of all data collected. Would it not have been preferable to have this one person abstract all the data or to have sampled in some way? What effects did data reliability have on the results?

d) There is a detailed description of the statistical methods. However it is unclear exactly which variables are being entered into each of the analyses. Again, the methods would be clearer if there were a list (with definitions) of all the study variables that were considered as predictors.

3) Results

a) There was a relationship between homelessness and pensioner status. Can the effect of pension be separated from age, for example, by creating a composite variable with three categories: old-age pension, younger-age pension, younger-age no-pension?

b) It is unusual to present significant variables in one table and non-significant variables in another. Table 5 could probably be deleted.

c) The issue of colinearity between the predictor variables is another concern. It's not clear how this was dealt with.
d) I don’t feel that the analysis adequately addresses determinants of return visits in patients admitted to hospital and those discharged.

4) Discussion

a) You should compare your results with those of other studies that investigated determinants of return visits. Is your overall return visit rate comparable with those reported from other studies? I don’t think you should confuse these findings with hospital re-admission rates.

a) The issue of homeless people having a significantly lower incidence of access to an interpreter needs further exploration. To what extent did these individuals need an interpreter?

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

This paper needs substantial re-working and greater focus and continuity between the objectives, methods, results and conclusions. As it currently stands, there is a lot of extraneous material that detracts greatly from the readability of the paper. Clarify which are the predictor variables of primary interest, and the important covariates (for adjustment of confounding). There should be a section on study limitations that addresses the limitations of the data and potential confounding by factors related to medical need. Finally, I would recommend that either the focus be on patients who are discharged from the ED or that data are presented separately on those admitted to hospital and discharged from the ED.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

Quality of written English: Acceptable

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.