Reviewer's report

Title: Risk stratification and rapid geriatric screening in an emergency department - a quasi-randomised controlled trial

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Reviewer: Jane McCusker

Reviewer's report:

This article contributes to the literature on 2-step geriatric screening in the ED: use of a rapid screening test, followed by an assessment of unmet needs among those who screen positive and the implementation of appropriate interventions. This study used a validated screening test, the TRST, followed by “geriatric screening” by a GEM nurse using a 15-item screening form, and appropriate interventions. The authors used “quasi-randomization”, or allocation to intervention or control group based on the last digit of their national registration card. This is an acceptable method of allocation that should produce results similar to true randomization.

Major issues

This study has a number of important limitations that need to be clearly addressed in order for the reader to interpret the results appropriate. Certain aspects of the methodology are not clearly described.

1. Methods: Consent procedures need to be described. Was consent obtained after allocation? Verbal consent is mentioned for the intervention group – what about the controls?

2. Data collection: were baseline interviews conducted by same staff in intervention and control groups?

3. Blinding – were telephone follow-up interviewers blind to allocated intervention?

4. The large number of intervention group patients who did not receive the intervention and of control group patients who did receive the intervention are major limitations. Were these “missed” group of patients followed also (necessary for an intent-to-treat analysis)? The authors should do a sensitivity analysis by treatment received.

5. The TRST screening results are difficult to understand. Was a score of 2+ or 3+ an eligibility criterion (discrepancy between text, and Figure).

6. The 11.8% admission rate in intervention group is interesting, and requires some discussion.

7. The study limitations need more discussion and should be mentioned in the
Abstract.

Minor issues
1. The location of the study should be mentioned.
2. Introduction: 2nd paragraph needs references.
3. Figure 1: exclamation marks in the boxes?
4. Baseline ADL/IADL measures: what was the reporting reference period, current function or pre-morbid function?

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.