Reviewer's report

Title: Depression is associated with longer emergency department length of stay in acute coronary syndrome patients

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Reviewer: Andrew Steptoe

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This study is an analysis of the time that patients with NSTEMI/UA forms of acute coronary syndrome stay in a hospital emergency department (ED). The analysis shows that depressed patients spend longer in the ED than others, after controlling for covariates. The study has been carried out well.

There are two general issues concerning this paper about which I am not certain. First, why is length of stay in the ED an important issue? I can understand the concern about overall length of stay following an ACS, but there does not seem a strong rationale provided here for the importance of the ED stay in itself. This needs to be addressed more clearly.

The second is the generalizability of the findings. The authors note that length of stay in the emergency department is influenced by a number of factors. They have done a good job in controlling statistically for individual-level factors such as ethnicity, income, etc. But the fact remains that the study was done in a single hospital. This institution may have different rules and conventions about length of stay than others, depending on factors such as the ED size and intake of patients, policy on bed occupancy, the geographic location of the Cath Lab, etc. Can readers be confident that the findings would apply in other institutions?

In addition, there are some specific points:

1. It's not clear how many potentially eligible patients were not included in the study because they refused to participate or for some other reason. Presumably during the 15 month recruitment period in a large hospital, more than 139 NSTEMI/UA patients were admitted. How many were there overall, why could they not be included, and what implication might this have for the results?

2. It's also not clear exactly when the depression measures were administered. I understand that the participants underwent a diagnostic interview 3-7 days post ACS, but they also completed the BDI and PHS. When were these done? At the time of the interview, or while in hospital? Did all the current depression assessments refer to the two weeks before ACS, or the period both before and after ACS (for example, if the interview took place 7 days after ACS)?

3. The SD of the length of stay is very large, suggesting wide variation. Is it legitimate to analyze length of stay as a continuous variable? Might some categorical procedure not be more appropriate?
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: No competing interests