Reviewer's report

Title: Who uses emergency departments inappropriately and when? A national cross sectional study using a monitoring data system

Version: 1 Date: 18 October 2013

Reviewer: Adrian Boyle

Reviewer's report:

This is a study using routinely collected data to examine inappropriate attendances to emergency departments in England. The authors are to be congratulated on conducting a high quality study on an important issue at a time of national crisis. My comments are intended to improve the usefulness of their findings.

Discretionary revisions
1. In the background, they could mention that IAs have a corrosive effect on staff morale and that this harms retention.
2. The assertion that IAs harm performance against the four hour standard is not borne out by thoughtful analysis. Indeed, there is a perverse incentive that IAs are easy to treat (with nothing) and generate money for a Trust (as costs are below tariff) and rarely wait longer than four hours (so help 4 hour target performance.)
3. LBT / Left having refused treatments are a group who are probably inappropriate service users. The authors should consider, in the limitations) whether including these in the analysis would have altered the results ( I suspect not)
4. I am not sure the authors need to include actual solutions to the problem they have helped define better, this is an area of active study.
5. The authors may also need to consider the effect of telephone triage services, as national implementation has been very variable.

Major Compulsory Revisions
1. The results are intuitive, but it is surprising how little variation there is in table 2. The data-set is huge, so statistical significance is not really an issue here, but the discussion should indicate where there is little variation as well where this is variation.
2. The findings that low age, deprivation, Bank Holidays and the weekend are predictors really signal to me that this issue is about access to primary care. The discussion needs to at least consider this and ideally present some data about relative access to primary care, both temporally and geographically.

Quality of written English: Acceptable
**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests