**Reviewer's report**

**Title:** Using routine data to monitor inequalities in an acute trust: a retrospective study

**Version:** 1  **Date:** 23 October 2011

**Reviewer:** Jonathan Cox

**Reviewer's report:**

This article attempts to examine whether retrospective routine data associated with a large acute English NHS Trust can be used to monitor variation in healthcare access and activity in seven common surgical procedures for groups of patients according to age, gender, ethnicity and social deprivation. The article concludes that there was little evidence of systematic inequality. The article does not make a significant advancement of current knowledge but offers a useful assessment of current inequalities in health service access and activity for some population subgroups.

22 compulsory revisions are suggested that would clarify and improve the article substantially.

**Major compulsory revisions**

1. The article does not really discuss whether routine data can be used to monitor either inequality or inequity and so the article does not adequately answer the research question.

2. The article needs to clearly and consistently outline the research question that is being investigated.

In places the article seems to confuse inequality and inequity and it is not clear which approach is being used. In the discussion fairness and inequity is considered whereas most of the article examines inequality.

**Abstract**

3. "inequity... is not routinely monitored" How do the authors know that Trusts are not routinely analysing their own data to assess inequity?

**Background**

Gives a useful overview of inequality and inequity. Again, the background does not clarify if this article is considering inequality or inequity. "We use the term
inequity... unfair"

4. How do the authors define unfair, ie unfair to who, there are various definitions of unfairness that can be used.

"However, if certain people are systematically..." this sentence suggests that inequality implies inequity which is not the case.

5. "It is important to establish to what extent..." Can the authors please explain why this is important.
6. "could outline problem areas..." please outline problems considered

Methods
A brief discussion of specific coding changes during data period would help.

7. What was the data source (eg Info dept in acute trust, public health observatory, IT dept of a PCT?)

8. FCEs link together to form a spell. There is a single admission for each spell. Does the data source allow hospital transfers to be recognised?

9. What was proportion of transfers?

10. An overview and data summary would be very helpful, eg number of patients, number of admissions etc.

Procedures & database inclusions
11. How were differing case mixes taken into account? OPCS?

12. Explain main operative procedure. Is bariatric surgery really one of 7 most common procedures?

13. What is reason for excluding non-elecs, day admissions etc? So can use waiting time? What if some patients became emergencies as they couldnt wait any longer?

Measures of inequality
14. Some discussion of data quality needed.

15. Why Carstairs index used? How used to determine deprivation of an area? What areas?

16. Better explanation of Charlson index needed. Was severity estimate used, if so how done?

Dependent variables
17. What about time suspended from waiting list not actively waiting?

18. What if all deaths were in the same subgroup - would be very important impact.

Power calculations
19. Is the study sufficiently powered to detect the observed finding? Please discuss.

Discussion
20. How can authors be sure that inequalities are not delivering equity?
21. No discussion of whether it is feasible to monitor inequalities with this routine data. Not answered the original question.
22. Its maybe not surprising that some inequalities were found given all the tests that were performed.

The language could be improved throughout the article to improve readability.

Discretionary comments
1. Gender relates to behaviour and role, what is recorded in this NHS data is (biological) sex
2. Waiting time relates to access not process.
3. The article would benefit from the inclusion of a section in the discussion that outlines what is already known on this subject and what this article adds to existing knowledge.
4. Data analysis: "Logistic regression was used for each... inequalities" these are explanatory variables, not inequalities

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

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