Reviewer's report

Title: Health systems performance in sub-Saharan Africa: governance, outcome and equity.

Version: 1 Date: 8 December 2010

Reviewer: David Peters

Reviewer's report:

Major compulsory revisions

Methods

• The problem with missing data is inadequately addressed. By dropping observations where there are missing values, the results can be biased. Is there an analysis of their “missingness”? Are the values missing at random? Did you try different techniques to address the problem of missing values?

• Governance can be shown to be a potentially causal variable for both the dependent variables (e.g., U5MR) as well as for immunization coverage (see “Analysis of Cross-Country Changes in Health Services”, in Peters et al (2009) Improving Health Services Delivery in Developing Countries). This creates a problem with endogeneity that is not adequately addressed in the models used. Some discussion of this is needed, or some other changes in the analytic models.

Sound data

• It would be important to know how reliable and valid the governance measures are. Without such information, it is hard to interpret whether the findings are meaningful.

Minor Essential Revisions

• The table 2 title (which includes descriptions that belong in notes rather than the title) has a description of model 2 which is inconsistent with their description in the text and the data shown, and the description of model 3 is missing.

• 3 significant figures for the p values (e.g. p=.199) where the sample size ranges from 25 to 37 is a misleading level of precision – please simplify this. A p value of “.000” should not be presented as a result (ever – see BMJ advice on reporting statistical results) – consider presenting the result as p<0.001.

Discretionary revisions

• The points made about the relevance of the purported lack of distinction between health systems and healthcare systems in high income countries is contestable and seems out of place in an article where this is not addressed by the research.

• The description of governance as a “structural artifact” seems inconsistent with
its definition as a process, and particularly since its analyzed as a causal factor of 2 dimensions of health systems performance.

• The discussion is on the light side. Too much is made of the lack of association between U5MR and U5MR quintile ratio, when there is so little statistical power to detect an association in the first place. The point that health systems performance is multi-dimensional is an important one in any event. The health systems model which the authors refer (World Health Report 2000) also shows other dimensions of performance in their model (to say nothing of what is shown in the statistical annexes). In addition to discussing more of the methodological weaknesses and how to overcome them, more could be made about the proposed causal model for governance, and how to investigate further.

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

**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