Reviewer's report

Title: Predictive validity of the UK Clinical Aptitude Test in the final years of medical school: a prospective cohort study

Version: 2 Date: 20 January 2014

Reviewer: Bernard Cerutti

Reviewer's report:

In this manuscript, the authors investigate the link between UKCAT and performance regarding written exams or OSCE in Year 4 and 5.

One of the assets of this study is that a potential link between UKCAT and Year 1 was investigated in the same cohort.

The reading is simple and straightforward, but more attention may be paid to the presentation of the results and some points of the discussion.

Major Compulsory Revisions

1) DISCUSSION: The assumption "We identified that the UKCAT is better at predicting performance in the later years than in the earlier years of medical school" is not completely supported by the contents of the paper at this step. The authors may compare more formally the association between UKCAT and Y1, Y4&Y5 respectively. Also what is the association between UKCAT and Y1 for those students who belong to the Y4&Y5 sub-cohort of the authors?

2) DISCUSSION: The argument of statistical power is not really acceptable for this study, in which no sample size was targeted. It could be more appropriate to simply write something similar to "Data for the Dundee cohort, which is however relatively small, make the results somewhat less generalizable."

Minor Essential Revisions

3) RESULTS: Title of Table 4 should give more details and should allow the reader to understand which regression analyses were done.

4) RESULTS: Columns of Table 4 deserve more explanations

5) RESULTS: Notation used for (Student?) tests' results should be explained at some point. I probably do miss-interpret them, but how could de degrees of freedom be higher than the number of observations?

6) RESULTS: The authors might have obtained stronger results if they had integrated (for Y4 written, and Y4 OSCE) all the available results in a single model, with a site (Aberdeen/Dundee) effect.

7) DISCUSSION: it is quite surprising that unless for Years 4&5, no correlation was observed for Year 1. This may even question the educational contents or assessment methods at Year 1... In any case, this point probably deserve more discussion.
Discretionary Revisions

8) INTRODUCTION: Please provide some references regarding the statement "Unfortunately, measures of achievement, such as A levels and highers, while widely used in selection decisions, have been shown to be skewed by socio-economic class."

9) METHODS: The authors may consider replacing Table 2 by a flowchart that could be clearer. For example in Aberdeen, did all 10 student "lost" between Y4 and Y5 repeat Y4?

10) RESULTS: Tables 3 & 4: it would be useful to get the "n" used for each of the lines of the table.

**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’