Reviewer's report

Title: Even one star at A-level could be "too little too late" for medical student selection.

Version: 1 Date: 16 November 2007

Reviewer: Jeremy Smith

Reviewer's report:

General

This was a well written and informative article, which raises questions about the ability to distinguish between medical school applicants in the near future unless A-levels are not reformed to enable the better performing students to be distinguished.

The paper looks at the A-level qualifications of all UCAS applicants, medical school applicants and medical school entrants. The authors find that some 15% of all applicants, 45% of medical school applicants and 62% of medical school entrants have the maximum 3As in their best 3 A-levels (excluding General Studies). The authors argue that, with nearly half of all medical school applicants getting the maximum score, selection becomes difficult. Fitting a censored normal distribution to the data, the authors estimate that only around 11% of medical school applicants would have scored at the level of 3 A*, with A* being the new A-level grade being introduced for students starting their A-levels in September 2008. However, the authors go onto to make the point that if grade inflation continues at roughly the same rate as at present (over the last 10 years), then by 2020 around one-third of all applicants would have 3 A*. The authors therefore argue for the introduction for a A** classification at A-level to distinguish truly outstanding performance at the projections suggest.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

The authors use a censored normal distribution to fit the distribution of A-level performance of students. The fit of the censored normal to the data is shown in Figures 1a, 1b, and 1c by comparing the black and yellow bars, which the authors claim is "good", which is true except for the systematic underprediction of 28 points nad the overprediction of 30 points. Perhaps the authors ought to consider some statistic on the appropriateness of the fit, e.g. a Pearson goodness of fit measure.

The over-estimation of the people on 30 points, will then lead to an over-estimation of people projected to attain 36 points (3 A*) and 42 points (3 A**).

The approximation of the distribution of all applicants (when points range from 6
to 30) by a censored normal seems reasonable, but when the range of points is much narrower essentially 20-30 (so 6 distinct values for medical entrants) perhaps the approximation is less good.

Perhaps the authors could show that their estimates of the proportions getting 3 A* or 3A** grades are reasonably robust to alternative approximations of the distributions, if it is the case that the goodness of fit tests reject the null.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

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Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

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