

## The London Hospital Medical College denies selection bias

EDITOR,—Aneez Esmail and colleagues state that the selection of applicants for entry to medical schools in the United Kingdom is subject to ethnic bias and imply that the medical school of the London Hospital Medical College is one of the nation's worst offenders in this regard.<sup>1</sup> People from ethnic minority groups made up 29% of this institution's intake for 1992, and our audit of admissions, conducted annually, indicates that almost certainly no selection bias (ethnic or otherwise) exists here.

In the year in question (1992) 1332 people applied for 97 places on the medical course. Among the 1332 applicants, 506 (38%) came from ethnic minority groups. Tracking of these through the selection process showed that 28 (29%) of the 97 people who finally entered the medical course were from these minority groups. Thus the decrement identified through the whole of the admissions cycle was in the ratio 1:3:1.

We therefore question the veracity of the data used by Esmail and colleagues and, especially, the ability of their analysis to eliminate potential confounding factors. Prominent among these and apparently not addressed by the authors are the following.

Firstly, choice works two ways and is exerted both by the admitting institutions and by any applicant who receives more than one offer. Substantial drift of particular subgroups may therefore arise and be driven by the applicants themselves rather than the institutions.

Secondly, comparisons may be confounded by differences in the percentage of the total number of applicants who are applying "second time round" after resitting A levels. This group is subjected to more stringent assessment criteria on the grounds that they are older and have had more time to study and therefore should perform better. As a result, their chances of ultimate acceptance are substantially lower. Any subgroup, if overrepresented within this group, will therefore tend to have a harder time in gaining acceptance.

Thirdly, most medical schools accept candidates only after interview, attempting to look beyond mere A level grades. The authors' views of A level grades as a benchmark of acceptability is therefore inappropriate.

Choosing the nation's future doctors is difficult. We are surprised and disappointed that the paper addresses itself to this matter in a simplistic and incomplete fashion.

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<sup>1</sup> Esmail A, Nelson P, Primarolo D, Toma T. Acceptance into medical school and racial discrimination. *BMJ* 1995;310:501-2. (25 February.)

## Sixth formers gamble over medical school choices

EDITOR,—Aneez Esmail and colleagues surveyed the acceptances of A level students by medical schools in 1992, comparing white applicants and those from ethnic minorities.<sup>1</sup> The same data, if the two groups are amalgamated, give the overall ratio of applicants to places for each medical school. These ratios are, of course, the chances of an applicant with a given A level score being accepted by a particular medical school, assuming that the

applicants to the various schools are comparable.

Let us take an example. A sixth form student who in 1992 had a high A level score of 26-30 points (A=10, B=8, C=6; maximum score 30) stood a much greater chance of being accepted at Belfast (where 56.8% of such applicants (130/229) were accepted), Cambridge (34.5% (196/568) or Guy's and St Thomas's Hospitals (31.9% (123/385) than at Nottingham (9.2% (100/1091), St Mary's Hospital (10.1% (44/434), or the Royal Free Hospital (10.5% (31/294)). If these differences could be shown to persist from year to year it would be reasonable for applicants to consider such information when applying to medical school.

The process of choosing a medical school is seen by many as an ill informed gamble; few medical schools provide any information about the qualities they are seeking in applicants, yet clearly their selection criteria differ widely. The result is that sixth formers are forced to rely on folklore and hearsay when choosing their medical school. An individual's application will be influenced by various factors, including evidence of discriminatory selection procedures as identified by Esmail and colleagues. We suggest that applicants could make a better informed choice of medical school if they had knowledge of percentage acceptance rates of the kind we have calculated, so that they could identify a group of universities likely to be most favourable to someone with their (actual or predicted) grades and choose from within that group.

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<sup>1</sup> Esmail A, Nelson P, Primarolo D, Toma T. Acceptance into medical school and racial discrimination. *BMJ* 1995;310:501-2. (25 February.)

## Cambridge reveals results

EDITOR,—Aneez Esmail and colleagues' article on acceptance into medical school and racial discrimination refers to applications in 1992.<sup>1</sup> The authors include among the high scorers at A level all those with scores of  $\geq 26$  points (ABB or ACC). Since, realistically, the minimum A level score required for a candidate applying to study medicine at Cambridge is at least 28 points (AAB) the results obtained from such a coarse stratification of A level scores can be misleading.

I have analysed the ethnic background and success rate of candidates for medicine at Cambridge in 1994-5, excluding those with scores of  $< 28$  points. The table gives the results. The percentages in the last column show the percentage of all the candidates who achieved at least AAB at A level who received an offer. The success rates were 44% for white and 36% for non-white applicants, giving a ratio of 1:2. By contrast, Esmail and

### Details of candidates applying to study medicine at Cambridge by ethnic background

Ethnic code	Total No of applicants	No (%) from independent schools	No scoring $\geq 28$ points (AAB)	No (%) scoring $\geq 28$ points and given offer
Black Caribbean	2	0	1	0
Black African	15	5 (33)	3	2 (67)
Black other	1	1 (100)	1	0
Indian	120	58 (48)	85	27 (32)
Pakistan	38	17 (45)	18	8 (44)
Bangladesh	5	3 (60)	1	1 (100)
Chinese	26	13 (50)	17	7 (41)
Asian other	54	29 (54)	36	13 (36)
Total non-white	261	126 (48)	162	58 (36)
Total white	568	284 (50)	480	211 (44)

colleagues' figures for applicants to Cambridge with scores of  $\geq 26$  points in 1992 give success rates of 37% for white and 25% for non-white applicants, a ratio of 1:5.

Cambridge receives a large number of applications for medicine from candidates from ethnic minorities (in 1994, 261 (29%) out of 907 "home" applicants or applicants from elsewhere in the European Union). This proportion is higher than that for most medical schools outside London. In 1994 only 842 (9.3%) of 9011 candidates at Cambridge (averaged over all subjects) came from ethnic minorities.

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<sup>1</sup> Esmail A, Nelson P, Primarolo D, Toma T. Acceptance into medical school and racial discrimination. *BMJ* 1995;310:501-2. (25 February.)

## Author's reply

EDITOR,—I C McManus and P Richards repeat some of the methodological problems with our paper that we highlighted. We believe that it is important to look at both offers of places and acceptances because both these measures are difficult to interpret, and we have submitted a further paper for publication, which looks at these issues in more detail. We can, however, state that our analysis of offers confirms the disadvantage faced by candidates from ethnic minorities, with a highly significant difference between medical schools. We therefore agree that it is a complex area that needs further research.

John Cunningham and Colin Berry take issue with our figures. The data were provided by the Universities and Colleges Admission Service, and if they disagree with these figures they should take issue with the service. We do not know, for example, whether the internal audit carried out by the London Hospital Medical College used the same definition of ethnic groups as that used by the service. Our data from the service for 1990-2 show that the London had 1868 white applicants and 1382 applicants from ethnic minorities. A total of 543 white applicants were given offers, compared with 159 applicants from ethnic minorities (odds ratio 3.15 (95% confidence interval 2.59 to 3.84)), and 208 white applicants were accepted compared with 50 applicants from ethnic minorities (3.34 (2.41 to 4.64)).

We understand that issues surrounding acceptance to medical schools are complex, but what we sought to show was that routine data on ethnic group collected by the Universities and Colleges Admission Service, which have been available for nearly five years, give an important insight into the problem of discrimination—that, after all, was the reason for collecting the data in the first place. We were the first researchers to obtain permission to analyse these data, but it should be the medical schools that ask for these data, review them yearly, and make them public so that applicants can make up their own mind about the relative disadvantage or advantage faced by students applying for university courses. Perhaps Susan Stobbs can repeat the exercise she has carried out for Cambridge on a yearly basis and make the results public.

The admission service through its customers (the medical schools) is in an ideal position to look at this in more detail because it can control for many more confounders than was available in our brief analysis. Until that is done, some medical schools will continue to be accused of practising discriminatory policies.

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