BRITISH MEDICAL JOURNAL

LONDON, SATURDAY 5 MARCH 1988

A blot on the profession

Discrimination in medicine against women and members of ethnic minorities has long been suspected,[1-3] but it has now been proved. St George's Hospital Medical School has been found guilty by the Commission for Racial Equality of practising racial and sexual discrimination in its admissions policy.[4] The commission decided not to serve a non-discrimination notice on the school, which it is empowered to do by the Race Relations Act, but as many as 60 applicants each year among 2000 may have been refused an interview purely because of their sex or racial origin. This is a sad finding not only for St George's Hospital Medical School but for the whole profession. It is now important not only that discrimination is swept out of St George's and the profession but also that it is seen to be swept out.

The story began in December 1986 when the commission was informed by Dr A Burke and Dr J Collier, both senior lecturers at St George's, that a computer program used in the initial screening of applicants for places at the school unfairly discriminated against women and people with non-European sounding names. The program had been developed by Dr Franglen, a member of staff, to reduce the work of selecting candidates for interview. It was also hoped that it would eliminate any inconsistencies in the way the admissions staff carried out their duties. The program was written after careful analysis of the way in which the staff were making these choices and was modified until by 1979 it was giving a 90-95% correlation with the gradings of the selection panel. This point is important: the program was not introducing new bias but merely reflecting that already in the system. By 1982 all the initial selection was being done by computer. Details of each candidate were obtained from his or her University Central Council for Admission (UCCA) form, but since this contains no reference to race this was deduced from the surname and place of birth. The computer used this information to generate a score which was used to decide which applicants should be interviewed. Women and those from racial minorities had a reduced chance of being interviewed independent of academic considerations.

Ironically St George's has a better record on racial matters than most of the other London medical schools and admits a higher than average proportion of students from ethnic minorities. For example, 12% of the students there had non-European sounding names compared with only 5% at the Westminster Medical School.[1] This is more worrying than reassuring as it raises the question of what is happening in the other schools.

The commission has made recommendations not just about this particular episode but also about how other schools can avoid similar difficulties. It is emphasised that where a computer program is used as part of the selection process all members of staff taking part have a responsibility to find out what it contains. A major criticism of the staff at St George's was that many had no idea of the contents of the program and those who did failed to report the bias. All staff participating in selection should be trained so that they are aware of the risk of discrimination and try to eliminate it. No one person should have sole responsibility for any stage of the process. The commission recommends that a question on racial origin be included in the UCCA form. The percentage of non-European students in a medical school provides little information unless the proportion among applicants for places is known. At present this information is unobtainable, and it is ironic that protection of the interests of minority groups should necessitate their identification on application forms. If this information is collected the ratio of students from ethnic minorities accepted will have to be monitored—perhaps this should be a job for the General Medical Council.

Many doctors, medical students, and lay people believe that discrimination on grounds of sex or race is widespread in allocations of places at medical schools and later at appointments to jobs. Gradually statistical evidence supporting this is becoming available.[2,3] What factors encourage this to continue? St George's receives about 12 applicants for each of its 150 places each year. About a quarter are interviewed and roughly 70% of these are offered places. The competition for jobs after qualification is even greater and worsens as one moves up the career ladder. This is strikingly illustrated in the letter from Professor J R Salaman on p 717. Appointments committees need to weed out the applicants somehow, and at the early stages this can be a fairly random process. Exceptional candidates will be selected but what happens to the many suitable people remaining?

It is easy to see why women might be discriminated against: there is more risk of them wanting time off work because of family commitments. Likewise, some overseas doctors do not have a sufficient command of English to practise medicine, because understanding the colloquial language is as important as grasping the technical terms.

© BRITISH MEDICAL JOURNAL 1988. All reproduction rights reserved.

These are unpopular but valid points. The difficulty arises in the attempts which have been made to deal with them. The way to cope with the family commitments of women doctors is not to refuse to appoint women. As nearly half of medical school entrants are now women the National Health Service cannot afford such a policy. It would be far better to look at ways of providing suitable crêche facilities, which would have the extra benefits of allowing nurses to be more flexible in the shifts they could work and improving the running of many of our hospitals. Similarly, discriminating against all those who have foreign names or black faces is an inefficient way of excluding those with a poor command of English. If the Professional and Linguistic Assessment Board examination is not sufficiently helpful better ways of testing language must be devised and more facilities provided to help those who need to improve.

Discrimination is wrong, but it is not enough to identify it—the reasons for it must be sought and solutions found. Although discrimination may arise as an inappropriate response to a genuine problem, all too often there is no explanation other than historical and cultural traditions. The attitudes at St George's cannot be excused. Only candidates applying on UCCA forms were involved, and they would all have had a good command of English. A study of doctors who obtained the membership of the Royal College of Psychiatrists in November 1981 or April 1982 showed that four times as many overseas as British graduates were still in registrar posts by 1984.[5] This discrimination cannot be explained as all the doctors had obtained higher qualifications and must have been competent in English and psychiatry.

St George's cooperated fully with the inquiry and has taken steps to avoid a recurrence. Attempts are being made to contact people who may have suffered, and three previously unsuccessful applicants have been offered places at the school. Other medical schools and appointments committees must ensure that any discrimination in their methods is identified and removed. A further incident like this may lead to a prosecution under the Race Relations Act. More importantly, medicine needs graduates from ethnic minorities and has an outstanding international tradition; it should be leading the way in assessing fairly all who want to enter its ranks.

STELLA LOWRY
Assistant Editor, *BMJ*

GORDON MACPHERSON
Deputy Editor, *BMJ*

1 Collier J, Burke A. Racial and sexual discrimination in the selection of students for London medical schools. *Med Educ* 1986;**20**:86-90.
2 Smith DJ. *Overseas doctors in the National Health Service*. London: Policy Studies Institute, 1980.
3 Smith R. Prejudice against doctors and students from ethnic minorities. *Br Med J* 1987;**294**:328–9.
4 Commission for Racial Equality. *Medical school admissions. Report of a formal investigation into St George's Hospital Medical School*. London: Commisson for Racial Equality, 1988.
5 Bhate S. Prejudice against doctors and students from ethnic minorities. *Br Med J* 1987;**294**:838.

Who needs pulse oximetry?

A pulse oximeter uses a non-invasive probe on the finger or ear to measure continuously the pulse rate and oxygen saturation of arterial blood. It does this by comparing the pulsatile changes in light transmission at two different wave lengths. Pulse oximeters are expensive but are of great use in anaesthesia, recovery, and intensive care. When should they be used?

Severinghaus and Naifeh evaluated six pulse oximeters and noted that: "Precision was independent of probe location [ear or finger] but differed widely between instruments."[1] The data obtained enabled manufacturers to improve the function and accuracy of their products. There are now over 15 firms manufacturing pulse oximeters, and in Britain the cost of an instrument has fallen from over £4000 to less than £2000. Pulse oximeters vary in design and sophistication; most work off the mains but have a built in rechargeable battery. They usually have a digital display of pulse rate and oxygen saturation with high and low alarm settings for both. The data are also presented audibly—the tone varying with oxygen saturation. Thus during the intubation of an infant, for example, the oxygen saturation can be *heard* falling if laryngoscopy is prolonged.

Pulse oximeters have many uses in anaesthesia but are particularly valuable in paediatric anaesthesia, one lung anaesthesia, and in other instances where oxygen desaturation is a constant threat. A knowledge of the patient's arterial saturation is arguably the single most important piece of information needed during anaesthesia. They are also very useful in monitoring patients whose skin colour may be difficult to see because of pigmentation, surgical drapes, or poor lighting.

The importance of monitoring arterial oxygen saturation during anaesthesia has been emphasised in the *Standards for Basic Intraoperative Monitoring* published by the American Society of Anaesthesiologists[2] and in the *General Professional Training Guide* published by the Faculty of Anaesthetists of the Royal College of Surgeons of England.[3]

Pulse oximeters are also of great value in intensive care units and high nursing dependency units. As well as providing routine monitoring they also reduce the need for blood gas measurements. When the aim is to achieve adequate arterial saturation with the minimum of added oxygen, the inspired oxygen concentration can be titrated against the patient's oxygen saturation. Such monitoring is useful in medical wards, and Mihm and Halperin have shown its value in managing patients in respiratory distress.[4] Pulse oximeters may also help in managing cardiac arrest: House *et al* have evaluated their use in neonatal resuscitation and found them to offer a reliable and objective method of gauging the adequacy of resuscitation efforts.[5]

The value of measuring oxygen saturation during patient transport has been shown by Tyler *et al*, who used a pulse oximeter on patients breathing room air during transfer from the operating theatre to the recovery ward.[6] They found that 35% of patients suffered hypoxaemia (oxygen saturation below 90%) and 12% suffered severe hypoxaemia (oxygen saturation below 85%). In one instance that I know of a seriously ill patient was monitored continuously during a flight in an air ambulance from Cyprus to London and during the onward journey by ambulance.

The full range of useful applications of pulse oximetry has still to be evaluated, but in the operating theatre, the recovery ward, the intensive care unit, and the high nursing dependency unit it offers a form of relevant continuous