who suffered all of these emotions—and more—for three centuries, as well as the ravages of poor or no education, housing, nutrition, and health care? Overwhelmingly, black people supported sanctions.

Contrary to the rather silly editorial that Crawshaw quotes from the *Cape Times*, “the campaign” (for sanctions) did not play into the hands of the “destructive right-wing,” which is now an irrelevant force in South Africa. Rather, it led to the emergence of the remarkable Nelson Mandela and his government of reconciliation and the appointment of the able new minister for health, Dr Nkosazana Zuma. Like so many academics and professionals who were opposed to apartheid, she was forced into exile and suffered far more than mere “damaged self esteem.”

Having publicly supported sanctions for over 30 years (even while I was an academic in South Africa), I now take the opposite view and urge the strongest possible links—academic or other—with the country to help repair the damage of the past and build the sort of country free of prejudice that most South Africans wish to see.

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1 Crawshaw R. Out in the cold: academic boycotts and the isolation of South Africa [editorial]. *BMJ* 1995;311:136. (8 July.)

South African Medical Association colluded with apartheid

EDITOR,—The South African Medical Association's apology for its attitude and silence during the years of apartheid must be welcomed.¹ When we look back over those years, however, it is not only sins of commission to which attention should be drawn but also those of omission. One of the saddest aspects of the association's attitude, apart from in relation to the death of Steve Biko while in police custody, was its failure unequivocally to condemn apartheid in medical education. Few people will remember the battle that was fought in 1943 and subsequently to allow non-white medical students to continue their education in the clinical years at Cape Town University and our having to sign a document undertaking not to attend any class, clinic, ward round, tutorial, operation, or postmortem examination involving a white person.

I still look at the press and other reports of my suspension in 1944 for being present at an orthopaedic tutorial at which white patients whose fractures were in plaster of Paris, and their x ray pictures, were used for teaching. The saddest fact among those papers is the absence of any condemnation by the South African Medical Association of that dreadful event and the ensuing controversy over apartheid in medical education. It is pertinent to quote from a contemporary editorial in the *South African Medical Journal*:

This Journal is the mouthpiece of an Association that consists of members some of whom are profoundly shocked by what is taking place today in our ranks, and of others who take an exactly contrary view to that held by Dean Hulme [on medical apartheid]. Both sections are representative of the two conflicting South African schools of thought and both have the right to demand that, until the Association has expressed itself clearly and unequivocally on the points at issue, its official Journal should not commit its members to any policy which is not sanctioned by the authority of Council or Congress. . . . In this matter of the colour bar in medicine our Association has not, as yet, taken up an attitude that supports conflicts with what may be called the liberal and conservative schools of thought in the Union [of South Africa].

The remainder of the editorial fudges the whole issue.

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1 Sidley P. South Africa's doctors apologise for apartheid years. *BMJ* 1995;311:148. (15 July.)

2 The colour bar in medicine [editorial]. *S Afr Med J* 1944;18:221.

Maintaining clinical contact during research

EDITOR,—As a clinician working in research in medical informatics I am concerned that there is no career structure to enable me to maintain clinical training at the same time as pursuing research. Currently, medical informatics has traditional links with epidemiology and general practice, which have arisen both from the use of computers for statistical analysis and from the presence of computers on general practitioners' desks. This will inevitably change as we move towards electronic patient records and an NHS network for communication between disciplines and sites. Skill from all areas of clinical medicine will be required to ensure that accurate and relevant information can be captured, stored, transferred, and received. Little is to be gained by maintaining the current situation, whereby the only way to maintain clinical contact as a researcher is by taking locum posts. This discourages clinicians from committing themselves to research in medical informatics, and those who do this become less valuable as a source of clinical knowledge as they lose their clinical base.

In the United States posts exist that are split between research in medical informatics and true clinical training. Such split posts are available at all levels of training from junior to consultant and provide a career structure appropriate to both medicine and medical informatics.

Nothing similar exists in Britain. This will prove to be a problem when current students being taught medical informatics as an integral part of the practice of medicine find on graduating that, although the use of computers is fundamental to their work, there is no mechanism for them to influence the development and implementation of clinical systems.

I believe that we can anticipate this before it becomes a problem, and I would welcome the opportunity to discuss the practicalities of introducing split posts in all disciplines of medicine. Medical informatics has now been taught in the curriculum for one year, and there are plans for there to be some input throughout the five years of undergraduate training. This means that in five years' time senior house officers will be looking for the opportunity to take up split posts. If a policy and structure can be agreed in the near future, teaching in medical informatics can be directed during the clinical undergraduate years to facilitate a seamless transition into such posts.

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Genetic testing in the classroom

EDITOR,—Audrey Tyler and her colleagues are concerned that students' practical work could lead to genetic screening without pretest counselling.¹ We have run such practicals for four years (for science students) and for two years (for medical students). Students are given the option of testing

whether they are carriers of the defect causing cystic fibrosis (in terms of the $\Delta F-508$ mutation) after an explanatory lecture by one of us (SR), in which the implications of the possible positive results are stated.

Confidentiality is assured because students pick a unique number out of a hat; after producing a saliva sample they use that number to label their tube. Anonymous samples are available for students who do not wish to test themselves; these are similarly labelled. Tests are then performed under supervision. Results can be obtained only by students who know their number and whether the sample is their own. The class knows that students found to be positive can have a fast track genetic consultation (with SR and colleagues). All who take up this offer are relieved to know their status and keen for their families to be given information and offered carrier testing.

Anonymous questionnaires have sampled the students' views, and the practicals have been found to be popular. Most students (over 90%) have chosen to test their own status. One student said that the pretest counselling lecture was “over the top” (in indicating the dangers of being tested); most welcomed the opportunity that the lecture gave them, before testing, to have discussions with their peers and teachers about the pros and cons.

In practicals of this type, peer pressure might cause unwilling individuals to follow the group,² but we would expect such difficulties to be shown by our questionnaires or the counselling after the test. The practicals have, on the contrary, proved a highly popular part of our biochemistry course and have extended the work of Grody *et al.*²

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1 Tyler A, Ball D, Clarke A. Genetic testing in the classroom. *BMJ* 1995;311:330. (29 July.)

2 Grody WW, Kronquist KE, Lee EU, Edmond J, Rome LH. PCR-based cystic fibrosis (CF) carrier screening in a first-year medical student biochemistry laboratory. *Am J Hum Genet* 1993;53:1352-5.

Extracontractual referrals

Budgets need to be increased to realistic level

EDITOR,—Barbara Ghodse highlights both the administrative workload and the financial pressures imposed on health authorities by the extracontractual referral system.¹ I have analysed the extracontractual referrals processed by Rotherham Health Authority (population 250 000) during the three months April to June 1994. I found a similar number of extracontractual referrals per 1000 population and a similar ratio of emergency to non-emergency referrals to those given by Ghodse.

Because of the perception that an increasing number of extracontractual referrals were consuming increasing resources above the figure set for them in the budget I tried to identify referrals where reductions could be made. I assumed that emergencies were not amenable to modification and that forensic psychiatric cases (with the most expensive procedures) were also unlikely to be influenced.

Among the non-emergency referrals, trauma-orthopaedics and ophthalmology accounted for 45%. Trauma-orthopaedics cases were difficult to analyse by problem, but almost all were tertiary