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The Government, medical education and research

IN general practice circles mention of a white paper provokes discussion on the proposals for primary health care, yet there is another white paper which will also have far-reaching effects. Under the education reform bill,¹ universities will become agents of Government and 'will meet the demands for highly qualified manpower, stimulated in part by the success of the Government's own economic and social policies'. Universities will therefore be faced with the prospect of central direction in what to teach and what research to conduct. It is paradoxical that in the midst of calls for more entrepreneurial activity, there is an accompanying bill which will lead to more central control.

While accepting that institutes of higher education need to respond to changes in society there is ample evidence throughout history that universities have been sensitive to change, and that advances in knowledge in science, engineering and medicine have reflected the needs of our country. The problem in the last decade has been that universities have been starved of resources and the provision of basic research facilities has fallen to a point from which it is difficult to develop projects with sufficient promise to raise support from outside. Indiscriminate freezing of vacant posts and early retirements have distorted the relative strengths of departments in a haphazard way. In the 1988 Dimpleby lecture, Sir George Porter, the President of The Royal Society, warned that the Government was forsaking our scientific traditions for something more immediately profitable and seemed intent on 'downgrading the pursuit of knowledge in deference to the pursuit of affluence'.

The contribution of British researchers to international science in the last decade has declined dramatically. While other countries are increasing their investments in research the number of university funded posts in the UK has been cut by 15% since 1981.² The recent report from the House of Lords Select Committee on Science and Technology points out that morale in the research community is at a low ebb, and calls for a special allocation of around £25 million a year for three years to be made for the modernization and re-equipment of medical research facilities in the UK.³ In medical schools, contracts with pharmaceutical companies can help alleviate short-term financial difficulties but this is a shortsighted approach to funding. The drug industry is primarily interested in its own products and is not prepared to invest in non-drug related research such as preventive medicine, mental illness and the problems of ageing.

The apparent philosophy of the Government is to return to the ideas first put forward by Lord Rothschild who championed the customer-contractor principle in which the scientist presents a research proposal to the Government, and if the Government approves, the research worker is awarded a contract to undertake the work and produce the desired result. This presumes that scientific discovery can be planned and premeditated, a notion which is seldom successful in bringing about major breakthroughs. The discovery of penicillin, insulin, blood groups and deoxyribonucleic acid, to name but a few, came about by research workers pursuing original ideas uninterrupted by the need to satisfy rigid contracts. In addition, too much central control of research will preclude support for subjects such as the relationship between poverty and ill health. A more sinister aspect of customer-contractor research has been the new Department of Health and Social

Security regulations under which research workers have to obtain the Department's permission before publishing the results of their work.

Where does this leave our universities? The arbitrary league tables drawn up by the University Grants Committee in 1986 highlighted the fact that the university system had no reliable method for appraising institutes of higher education. The lukewarm response in some quarters to the Jarratt report⁴ which emphasized the need for universities to develop up-to-date in-house assessments of performance was a sign of entrenched attitudes. In spite of obstacles, the need for formal, objective and systematic appraisal of people and groups of people within higher education is unavoidable.

When challenged by current Government policies it is time for us to consider how best to define the aims of higher education. Universities must not be seen to be running from something but running towards something. As a member of the university community the question I must ask myself is 'am I trying to justify my existence or am I trying to get something done?' If general practice is to survive in the increasingly competitive environment of the university system then its academic base needs strengthening by the encouragement and completion of good research. If performance review is a central plank of the Royal College of General Practitioner's policy,⁵ then it has to be matched by a recognition that the lifeblood of an academic discipline is original work. There is little point in the College complaining about the small amount given by Government to research in primary care when the College only allocates 2% of its annual income to research.

Does it matter that universities and medical schools are now stretched to the limit? As long ago as 1913 the Royal Commission on Medical Education stated that 'the main justification for providing adequately for university education is the public interest and this is perhaps more apparent in the case of medical education than in any other discipline'. It is also worth remembering Harold McMillan's more recent comment that education was there 'to unlock the storehouse of the future'. As doctors, we have all had the privilege of a university education and we owe it to the next generation to ensure that universities are protected from further cuts and further erosion of morale. This is particularly vital in our medical schools which not only teach students but provide invaluable support to the

National Health Service.

There are signs that the universities can adapt fairly quickly — the percentage of their income now coming from the University Grants Committee is in the region of 57%, a 20% reduction on a decade ago.⁶ However, the extent to which the teaching of medical students is now funded indirectly by medical charities is an indictment of the Government's support (or lack of it) for teaching staff.

Frequency and rapidity of change will be the hallmark of university life in the late 1980s and 1990s and pressure from external forces will continue to increase. In times of trouble there are no absolutely correct answers to problems, only approximate ones. The outcome for the present and future generations of students will depend not only on those with the courage to take new paths, but on those with the wisdom to recognize the importance of supporting the seedcorn in the university system. Unfortunately the need to support research, especially in basic sciences, is often misunderstood and frequently unappreciated, yet the alternative to the pursuit of knowledge is the maintenance of ignorance. Success in responding to the more damaging onslaughts on universities will depend on positive responses to change and the harnessing of internal strengths in order to adapt to an ever changing world. If we value the presence of general practice within institutes of higher education the Royal College of General Practitioners has to play a part in responding to the Government's policies about the future role and function of universities in the UK.

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Use of very low calorie diets in obesity

VERY low calorie diets can be defined as liquid diets containing at least the recommended intake of vitamins and other essential nutrients but only providing 600 kcal (1.5 MJ) or less of energy per day. The currently available commercial preparations should not be confused with the liquid diets introduced in the early 1970s. These were deficient in protein, potassium and other nutrients and were associated with cardiac arrhythmias and a number of sudden deaths in obese but otherwise healthy individuals. The present formulations appear to be free of major complications,¹ and the adverse effects which do occur are those associated with any regimen producing rapid weight loss — postural lightheadedness, tiredness, menstrual irregularities, transient hair loss and acute gout.²

That strict adherence to very low calorie diets will produce weight loss is indisputable,³ though not necessarily always desirable. It is important to bear in mind that 1 kg of adipose tissue provides 7000 kcal of energy. It follows that if a woman with a daily energy expenditure of 2000 kcal can adhere to a

conventional 1000 kcal diet, she will lose adipose tissue at a weekly rate of 1 kg. By adhering to a very low calorie diet, the rate of adipose tissue loss will be increased to about 1.5 kg per week. It has been suggested that many patients who become disheartened by the rate of weight loss on a conventional diet will be encouraged to adhere to a very low calorie diet because of the increased speed of weight reduction. It is clear that either the claims of some commercial companies are exaggerated or that the extra weight loss attributable to these diets is not adipose tissue.

It seems probable that the major advantage of a very low calorie diet over a conventional diet is that some patients will find it easier to adhere to a liquid only regimen. Unfortunately, at present, there is no way of selecting suitable patients other than by trial and error.

The purpose of weight reduction is to lose extra adipose tissue, not muscle bulk. The propensity for individuals to go into negative protein balance during weight reduction is variable but