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Stagnation and despair in medical research

It is difficult not to conclude that our government is obsessively concerned with the present and almost recklessly unconcerned with the future. Nowhere is this more apparent than in its attitude to higher education and to scientific research, which are being treated as fringe luxuries unaffordable by a poor country. University incomes have been reduced so that they no longer cover the overhead costs of research, which by convention the research councils expect to be met from local university funds. The editor of *Nature* recently made the special point that relentless attrition and lack of any stability have damaged morale much more than would have a single traumatic, but once for all, cut.¹ In the present climate any sort of rational future planning is absolutely impossible. The "new blood" lecturer scheme has provided some welcome help, but it has been very small in relation to the problem, and the scheme is in any case due to be wound up.

The total science budget has not kept pace with wage increases, and the Government Actuary is now demanding increased superannuation contributions from the research councils. The Medical Research Council is specially threatened by the decision of the Advisory Board for the Research Councils to divert money away from it. Medicine has hitherto suffered less than other university faculties, but its future is now most alarming. Clinical research is by its nature usually less easily defined than basic biological research. This means that when the cut off point for funding of grant applications is set lower because of shortage of money clinical research projects tend to suffer disproportionately. This is particularly unfortunate since our coherent National Health Service provides unique opportunities for certain kinds of research, especially in environmental and preventive medicine and in the investigation and treatment of rare diseases.

Recent cuts have already led to closures of good units and projects, and more closures are inevitable.² The reduction of support by the Medical Research Council for intercalated BSc courses will be a serious impediment to the training of the next generation of medical researchers. Reductions in the numbers of university staff by early retirement, forced redundancy, and freezing of vacated posts have led to closures of whole departments and a countrywide pattern of internal promotions to department headships. Those still left in academic posts inevitably have less time available for research since clinical service work and teaching must have priority.

The distress of vice chancellors, deans, and department heads stems from their awareness of the importance of so called "critical mass" for research productivity. This was shown very clearly for medicine many years ago by Bull, who observed that the output of research from departments of medicine correlated strongly with their adequacy of staffing.³ When the present chaos has settled there may eventually be academic gains from the amalgamation of some of the London medical schools; but this process was begun long before the present cuts and at best may simply allow the productivity to stand still for a time in some joint schools, until the next cuts are made. Geography provides an insurmountable obstacle to amalgamations elsewhere.

The distress of young people seeking a career in medical research is more serious. In the past few years recruitment to academic posts in medicine has been falling off, as a recent survey by the Association of Clinical Professors of Medicine showed. This is due in part to the stagnation of the academic promotion ladder, but it has also a lot to do with the relentless contraction of the NHS. The government may take credit for maintaining the NHS budget, and perhaps even for expanding it in real money terms in difficult times; but the increasing average age of our population and the increasing opportunities to alleviate suffering or prolong life—by hip replacement, renal dialysis, cancer chemotherapy, coronary bypass surgery, and many other expensive but worthwhile treatments that a developed country should be offering to its people—have meant that Britain is falling rapidly in the world table of medical provision. Some wasteful excess provision of hospitals and administrative services has been eliminated by financial pressure, but present needs for medical services simply cannot now be met by present resources. The gap between reasonable demand and actual supply is rapidly widening.

The current medical manpower crisis compounds the problems facing medical research. The Short committee made sensible proposals to redress the imbalance between training and consultant posts by the replacement of many junior staff by consultants. In most parts of the country training posts are being rapidly cut or frozen, but in most cases their replacement by newly established consultant posts has been absolutely impossible because there has not been enough money. Competition for the available training and consultant posts is now fiercer than it has ever been, even comparing today's circumstances with the late 1940s,

when so many doctors from the services were looking for jobs. When I qualified in 1952 none of my classmates worried unduly about their careers. Medical services were expanding. Job opportunities existed all over the world. It took no great courage or determination to spend a few years in a research post. If the research proved unproductive the training was useful anyway. If one's originally chosen career in hospital practice was unattractive or unattainable it was not too difficult to switch to another training ladder, and entry into general practice was not unduly restricted.

The present rigidity of training schemes has brought many benefits. In hospitals the dead end junior jobs, offering no effective training at all, are being rapidly eliminated by proper inspection and rejection of unsatisfactory posts. In general practice the statutory requirement for adequate training of principals and the higher standards for employment of assistants have already led to tremendous improvements in recruitment. This will be reflected in higher standards in the next two or three decades. But these benefits have been bought at a fearful price. Highly trained people are waiting for many years stuck at senior registrar level. Entry into the registrar grade is becoming more and more difficult as the posts are cut back. It now takes the greatest courage to deviate in the slightest degree from the rigid training ladders either for hospital medicine or for general practice. Any prolonged research activity is viewed as the most risky option of all. Yet almost all the best work in clinically relevant research has been done by young full time workers who have been able and willing to give several years of their undiluted time to research. As yet the higher training committees have not been able to devise more flexible schemes allowing credit for partial but useful training in more than one major specialty. The sabbath of formal accreditation was surely intended for man; but it now seems that man is being forced to observe this particularly restrictive sabbath.

The long term ill effects of the present government policies are difficult to estimate, but I shall try to do so, realising that only economic arguments are likely to carry much weight. Probably the most important aspect concerns our visible export potential in medical equipment and expertise and our invisible export activities in the provision of medical services. Outside the United States (in which the achievements of the NHS are continually denigrated and misrepresented) the reputation of our health services still stands high—though admiration for their adequacy is now supplanted by admiration for their cost effectiveness. But when another country is looking for architects and contractors to build a new hospital is it going to take seriously the skills available in a country recognised as medically backward? When another country's young doctors have gone to the United States, Canada, Germany, or Australia for specialist training, is it likely when they return that they will recommend surgical instruments, imaging equipment, pharmaceutical supplies, and computer software systems from a country recognised as medically backward? When another country's citizens need personal medical help not available in their own country is it likely that they will seek this from a country recognised as medically backward? When postgraduates from abroad stop coming to this country for training not only shall we lose the money they spend here: we shall also lose their substantial contribution to the clinical services of the NHS.

Many of medicine's problems are not so dissimilar from those of science as a whole. A committee chaired by Sir John Kendrew is about to decide whether it would be better

for Britain to pull out of CERN (the European Organisation for Nuclear Research) and in effect bring to an end high energy physics research in Britain—rather than have other aspects of scientific research suffer continuing, demoralising, and seemingly relentless contraction. A medical analogy would be for the NHS to decide to close down all cardiac investigation and cardiac surgery, making one big cut in a service to a minority of patients rather than a lot of small ones in services to the majority. The total immediate impact on health would be small, just as the total immediate impact of winding up elementary particle research would be small. The long term effects of both actions would be utterly disastrous in their effects on morale. We should be stamped as a country which had finally abandoned any pretensions to greatness, and which was prepared simply to go down in history as a perfectly preserved fossilised example of the effects of an extreme and unyielding doctrinaire monetarist policy. To emigrate will soon be the only sensible thing that a young ambitious scientist, engineer, architect—or medical researcher—can be recommended to do. The contrast between Britain and the rest of the developed world in respect of scientific research is already horrifying; but I am puzzled by other contrasts. West Germany seems to be doing well despite being in the grip of the most rigid egalitarianism with the unions holding almost absolute power; to secure its future prosperity Japan has given top priority to higher education and is spending huge sums of public money in expanding it; the United States, with the greatest budget deficit in history, continues to escape the anticipated retribution, while its economy is booming.

Meanwhile Britain continues to spend enormous sums on applied scientific research on armaments. When an American scientist working in some esoteric subject was recently rebuked for contributing nothing to his country's defence he is said to have replied that his work was one of the things that made the country worth defending. British medical research has often led the world in the past. It is surely worth trying harder to defend it in the future.

C J DICKINSON

Professor of Medicine,
St Bartholomew's Hospital Medical College,
London EC1A 7BE

- 1 Anonymous. Dead-end for British research [Editorial]. *Nature* 1984;310:261.
- 2 Deitch R. Cuts in public spending on medical research. *Lancet* 1984;ii:1285-6.
- 3 Bull GM. Teacher, student, patient ratios. *J Med Educ* 1963;38:667-9.

Radical cystectomy

British urologists do not appear to share their American colleagues' enthusiasm for radical cystectomy for elderly patients with advanced bladder cancer. This approach has, however, yielded promising results, and a recent study from southern California of 77 elderly patients who underwent radical cystectomy reported a three year survival free of disease of 60% in those aged 65-75 and 40% in the older patients aged 75-82 with an overall perioperative mortality of 4%.¹ Further studies from North America have supported the view that radical cystectomy is safe and beneficial for elderly patients with advanced cancer of the bladder provided that they are carefully selected.^{2,3}