THE POSTGRADUATE MEDICAL SCHOOL: THE FUTURE

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IT IS not much use talking about the future of Hammersmith and its school unless one first tries to think of the rapidly changing pattern of medicine in Britain in which the school will be operating. Looking back on 1948 I am constantly astonished by our inability to realise then how rapidly things were going to change. We were so busy reconstructing what we had, and reconciling people to the reconstruction, that little preparation was made for the rate of advance which, I suppose, in any case none of us could have been expected to be able to foresee. One thing that was settled then, which has spared us some of the difficulties of other countries, was that general practice was to be the basis of the health service, and the general practitioner the arbiter of the use of the specialist services. That was much more important to the specialist services than most specialists now realise. It protected the rapidly developing specialist services from being engulfed by public demand and, since the counterpart of this decision was that hospital medicine would be specialist medicine, it made urgent and inevitable the rapid distribution and development of specialist services to cover the whole population.

There was a very rapid completion of this pattern over the whole country, leaving not a two-tier but a two-stage organisation of medical care within which circumstances made possible much more rapid evolution of the specialist side than in general practice. The two do not compete. In spite of old grumbles about the out-patient department, the general practitioner does not expect the specialist to be taking his work from him and the specialist relies upon the collaboration of the general practitioner and, in turn, does not expect him to be doing the specialist jobs *sub rosa*. That is all right as far as it goes and, given the resources, it does go far enough for specialist medicine. If we have enough doctors, enough buildings and equipment the regrouped hospital services can evolve the necessary specialist sub-divisions and collaborative work upon which specialist medicine now depends. (Of course we haven't got enough, but that is another story.) It does not go far enough for general practice and the recent convulsion, from

which I hope we will now emerge, is really much more about the organisation of general practice than anything to do with its remuneration.

The British pattern of family doctoring is almost unique. You can see something like it in Scandinavia, Holland, and, to some extent, countries like Yugoslavia and Israel, but North America, Australasia, and Eastern Europe have moved away from it (though in different ways). The root pattern of organisation of general practice inherited with little change in 1948, at least in method of remuneration, did little to promote its physical regrouping and functional re-organisation — as specialist medicine has been re-organised into mutually supporting groups. There are, of course, a lot of group practices but few of them are as comprehensive or as well equipped as we will need in future, and still less have the nursing staff engaged in domiciliary work been grouped with them.

I believe we are about to see the pattern in general practice shaken up, and evolving as quickly as the specialist pattern evolved in the first decade of the health service, so that by 1976 you will find few general practitioners outside substantial groups — of six to 12 in most urban areas, perhaps less in rural, housed in premises designed or adapted for the purpose and with at least health visitors and home nurses working with the practice populations and based on those centres. Quite possibly other health activities like dentistry and medical social work will be operating from the same building. Since the main driving force to produce this result is the rapid elaboration of scientific medicine and since that elaboration will certainly proceed more rapidly in the next decade than in the last, no group will be sufficient unto itself. One of the main purposes of group practices will be to facilitate better relationships with the specialist centres at the hospitals; the other being to control and facilitate the work falling on each man. Anything from half-a-dozen to a dozen centres may be orientated toward a district general hospital where there must be a medical centre or institute available, to them all and to the hospital staff. There are a hundred and sixty-seven of these centres in England

and Wales now and they have all appeared within the last five years. This means that there are as many individuals or small groups of doctors, mostly specialists but a few general practitioners, who are organising postgraduate work in their centres for general practitioners and hospital staff alike.

If general practice is to survive long into the future, this is the way it must go. It must give a man his special relationship with a group of families and yet support him in meeting their needs with medical, nursing and other colleagues in the centre from which he works and with constant refreshment of knowledge from the place where more scientific techniques and specialised knowledge can be deployed — that is the hospital.

This means that postgraduate medical education will certainly be developed very rapidly over the whole country to meet the obvious need for continued learning for all doctors in the future. But it is not just a matter of refreshment of knowledge for older doctors. In this country now, (I am speaking of England and Wales) the numbers of doctors in general practice and in hospital work are nearly equal. But more than half of the hospital doctors are junior staff still at some level of training. They can be roughly divided into a small group of senior registrars, virtually specialist-elect, and approximately equal groups of the house officer grades and the intermediate grades. There are nearly as many registrars as house officers and senior house officers, and both these groups need much better organised training than they are getting now. Another of the odd assumptions of 1948 was that young doctors went through a series of grades en route to specialist status and just dropped off at various points into general practice. That clearly will not do now. Whatever the G.M.C. and the Royal Commission may conclude in their present examination of different aspects of medical education there will obviously still remain a pre-registration period after the qualifying exams, during which the undergraduate medical school ought to accept continuing responsibility for guiding the young graduate, to an extent few of them do now. I am sure that the pre-registration house appointments should be more carefully selected and that a greater effort should be made by the schools to place the new graduate in the kind of job that will give him the further training he needs. It is not just a matter of pushing him out and letting him work. He will be only too anxious to work and assume responsibility, but he must do it at this stage in circumstances that will also permit him to carry on his learning process by other means. There must be libraries, there must be organised group teaching and the consultants who have the privilege of being assisted by pre-registration house

officers must be those who are prepared to teach them. We can't leave this to chance; young doctors are far too important to our future to be disregarded or pushed around.

That gets us to full registration, but that is only part of the way to any medical career. General practice, specialist practice, even medical administration, will require several years of further vocational training, much of it in hospital posts, if medical men of the future are to get themselves, not to complete knowledge in medicine, but to that state of knowledge in which they can go on without direct support of seniors. If the pre-registration house officer posts are insufficiently organised, the next period is almost what my children call "organised chaos." A few favourite sons get looked after because, perhaps, they are brilliant and obviously vital to the future of their schools, but most either follow what the grapevine tells them about hospital posts, or what they hope is the favoured beaten track, or just pick up whatever happens to offer at the moment. Few of them can afford to lose any time, but there is virtually no attempt at organising for them a pattern of learning posts on the North American residency programme lines or even something much more flexible which our regionally organised hospital service ought to make possible. We must surely have better programming than this. More than half the present senior registrars are aged 35 or over. There are more consultants aged over 65 than under 35. There are indeed more consultants aged 60 to 64 than 35 to 39. This isn't because there are too few consultant posts. The number of new appointments for consultants has been varying between three and four hundred a year in England and Wales for some time past. There are still fields of great shortage in some specialties. We just don't programme the young graduate's early career or rather give him sensible guidance in producing a programme of his own. (And far too often he wastes months or years unemployed or in the wrong job.) But we desperately need to make adequate use of the years in the thirties when medical graduates *can* assume full responsibility and are most likely to be fertile and creative in the use of medical knowledge. I know registrars and senior registrars teach the consultants, but we can't keep them in pupillage for that.

I foresee, therefore, a rapid development in the next few years of better organisation of training of young doctors in hospitals, and to some extent academically, and that this will extend also to vocational training for general practice which has been almost totally ignored hitherto. We have drifted dangerously near the mere exploitation of many of the younger doctors as workers at a lower level in hospital. It will not do for *them*, and must

lead some of them to go elsewhere. It will not do for *us*, if we want the right kind of doctor in established practice inside or outside hospitals.

Medical centres at district general hospitals will, therefore, provide opportunities for teaching the young graduates too, and there will have to be day release schemes such as those which now exist in Wessex and in Birmingham to enable the junior hospital staff to use these facilities. This educational requirement will have to have priority. We are obviously going to be very short of doctors for a long time to come. We will deserve to be short if we do not do the things they need for their training at this stage; and if the only answer to getting the medical work we need done, pending the rapid increase in production of doctors that has already begun, is more staff, then we will have to dilute more with other trained staff. We can't have doctors that aren't there. Every man or woman who will become a consultant by 1978 is already a student or qualified.

If all the district general hospitals are going to become postgraduate teaching centres, where does that leave Hammersmith? I think it leaves this school in even more of a key position than it has occupied in the last 20 years. This school's outstanding contribution to medical education in this country has surely been research-orientated postgraduate teaching. There will be some research in district general hospitals but it will not be developed to the pitch or on the same scale of research here. There will be the M.R.C.'s new clinical research centre at Northwick Park, but it is likely to resemble more a group of M.R.C. units specially favourably located in a district general hospital, than a centre for postgraduate teaching like this. Again, I think the two will be complementary. It will be absolutely necessary that a proportion of the specialists in training in future should have the kind of opportunity that working in this hospital gives. There is a divisive tendency amongst specialties in some district general hospitals, where *this* hospital has always struck me as providing a most notable British example of team-work in specialised medicine. I do not know of anywhere else where the different departments are so closely co-ordinated as here. It may well be the distinctive influence that the essentially university nature of this hospital has brought to it. And yet it has managed to maintain a relationship with its immediate area, such as the district general hospital provides, and a degree of humanity which distinguishes it from some of the very heavily university-dominated hospitals of some other countries. In some fields of medicine, at least, I think this school will remain the most sought-after specialist teaching centre in the country, in the Commonwealth, perhaps even in the world. Moreover, this international position is extremely

important. We need to have the international links of Hammersmith in the interest of British medicine as a whole. The Chandigarh plan isn't just a flight of fancy or a piece of sentimental technical aid. It will give something to Hammersmith as well as to Chandigarh. I happen to be a believer in, as well as an exponent of, international health. We owe participation to the world, but we owe it to ourselves also.

Finally, a brief word about the changes in medicine. No one can be a reliable prophet about this. There are, of course, some pointers already. We have come through a period of conquest of many of the infective diseases. We have not yet applied the result of that conquest to obtain as full benefit as we could. We could, for instance, completely prevent in this country a number of communicable diseases which still occur. We could control venereal disease instead of having it constantly increasing. We should certainly, in the next few years, apply our knowledge of immunology to comprehensive prevention of a number of diseases including diphtheria, whooping cough, tetanus, poliomyelitis, smallpox, measles, perhaps rubella, perhaps infective hepatitis, perhaps influenza, and do it systematically for all infants in a manner that exposes them to a good deal less trauma than at present. What we do now is primitive compared to what application of the best immunological knowledge of the next few years could give us.

We are, of course, in the middle of another kind of pharmacological revolution. The new drugs multiply and as soon as any new substance appears the chemists are hard at work modifying it to make its effect more powerful or its side-effects less so. The sophistication of therapeutics will go on and its control will present increasing problems. The proper clinical evaluation of new drugs is very difficult to arrange. We cannot have effective drugs without having some dangers. The problem at present is one of balancing advantage against hazard. With widely used drugs for less lethal conditions we have a tremendous problem of judgment about the justifiability of small risks. Think only of the complexity of the problem of a minute risk which may or may not exist with one of the oral contraceptives.

We have already a great and rapidly increasing volume of scientific information from the laboratories and new techniques of investigation of such sophistication that a special kind of clinical physiologist is arising to undertake them. (The sort of pioneer work Denis Melrose has done here will expand rapidly.) We will soon be able to deploy such a volume of scientific information about every patient that its comprehension and analysis will require an effort and time that are simply impracticable. A paper in to-day's "Lancet"

estimates the annual increase of biochemical tests as one-sixth to one-fifth. We have, therefore, to apply automatic data-processing methods to analyse this information. We have equally to apply automatic data-processing methods to the longitudinal study of the evolution of chronic disease or degenerative conditions. We are going to have opportunities of investigating the nature of disease processes in this way which far exceed anything we have had in the past. We must also use automatic retrieval systems for analysed literature — the American MEDLARS. And we are going to have to get down to such analyses of common diseases, about which we think far too little. Chronic bronchitis, for instance, has been studied by the faithful few, partly here, yet is far more important to the health of the bulk of the population of this country than many of the conditions to which far greater research effort is devoted.

We are going to see the application of screening tests, particularly biochemical tests, to the earlier detection of chronic disease and we hope that this will lead to some measure of control. Medicine has hitherto been provided "on demand" for disease already manifest to the patient. That isn't going on. We are going to look for it earlier and earlier. Antenatal care is a classic example; mass radiography was another; cervical cytology is the current one — but it's also a warning. We don't really know the natural history of carcinoma *in situ*; and we should know what we are doing with screening. Mere vulgar curiosity isn't a sensible approach. But we have to plan — Mr. Cleland is at this time chairing a highly significant working party looking into the programme for cardiac surgery for the newborn. The Jungners in Sweden have tried to compute a Health Index based on biochemical findings; that may be fanciful, but there may be a lot to gain from periodical automated biochemical analyses of

perhaps a dozen parameters, the movement and relativities of which may prove to have a significance we do not yet understand. At least we should look to see. We are going to need the chemists on this and the engineers. This school is one of the few British schools to realise this.

I hope we are going to apply some of our intellectual effort to doing better by some of the commoner and well-defined conditions. The amount of hospital time, effort and funds we now devote to the in-patient treatment of varicose veins, tonsils and adenoids, herniae and perhaps a lot of other conditions really needs a long hard look. There must be better ways of doing some of this work. We've got to organise what we do and we've all got to be in it to some extent. The medical administration of many hospitals is almost anarchy.

We are clearly faced with awkward decisions on priorities, because we can't do everything. Take intermittent dialysis for renal failure — a truly life-giving procedure. It's cost is heavy — yet we can't restrict it to research centres now. The ethical problem becomes even more onerous. I don't know the answers — I only know we have to face the problems as a profession or have them answered for us by someone else.

Lastly, this hospital, as I said before, has given a striking example of the way in which the specialties can work together. The silly old jibes between surgeons and physicians are still made. They should not be; neither can work without the other and still less can either work without the laboratories.

Ladies and Gentlemen, I have gone on too long but I was given an impossible task. I merely now reiterate my faith in the place of this school as a leading influence in British Medicine in the next 30 years as it has been in the last 30. Thank you for the privilege of being here today.