CAREERS IN ANAESTHESIA IN THE UNITED KINGDOM
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CLINICAL PRACTICE
The great majority of trainee anaesthetists who intend to practise in this country have in mind a consultant appointment. Consultant contracts, as in other specialties, may be part-time or whole-time. A part-time contract implies the right to private practice and carries certain advantages from the point of view of income tax assessment. The basic salary for a part-time contract with a full complement of sessions is somewhat less than for a whole-time appointment. Both types of appointment carry eligibility for distinction awards.

The distribution of distinction awards between specialties is not even. The figures from the 1968 Annual Report for the Department of Health showed that only 17.8 per cent of consultant anaesthetists in England and Wales had distinction awards, compared with 49.9 per cent of general surgeons and 53.1 per cent of general physicians. The figure of 17.8 per cent was the lowest for any listed specialty except geriatrics. This sparse allocation of distinction awards may have to do with an out-dated concept in the minds of more senior members of other disciplines that the anaesthetist can fulfil no useful function away from the operating table. This view of the specialty—purely technical—has changed, and there are signs of the change being reflected in a more reasonable allocation of distinction awards for the future.

The time required for pre- and postoperative assessment and other activities such as intensive therapy, the management of intractable pain and obstetrical analgesia is commonly taken into account in the make-up of a consultant contract. The details of any contract are still a matter for decision by the Regional Hospital Board; in some cases there is so much work to be done that an ideal contract can scarcely be adhered to but, on the other hand, too much insistence on theatre work is not likely to attract applicants to posts of doubtful popularity. The nature of the operating theatre sessions, and of the work generally, is as a rule decided before a consultant post is advertised, but the need for some flexibility is generally recognized. It has sometimes been assumed that the newly appointed consultant should be assigned sessions that the established consultants are anxious to dispense with, but here again a more reasonable view is nowadays the rule. During the tenure of appointments the rearrangement of sessions between consultants, by mutual agreement, is quite common.

The S.H.M.O. grade has no future, and the future of the Medical Assistant is at present unclear. We are, in fact, awaiting so many policy decisions concerning postgraduate education and medical staffing that it is difficult to know where the Medical Assistant and the General Practitioner Clinical Assistant will eventually fit into the career structure in anaesthetics. The Todd proposal for a sub-consultant grade has provoked opposition; yet a great deal of work in most specialties is at present undertaken by sub-consultants in the “training” grades. It seems probable that the staffing position in anaesthetics during the foreseeable future will leave room for people, either in part-time or full-time employment and either combined with general practice or otherwise, who can give satisfactory anaesthetics with consultation available if needed, but who could not be appointed as consultants without a substantial lowering of standards.

The disadvantages and dangers peculiar to a life in the practice of anaesthesia are probably clear enough to readers. Some anaesthetists, although by no means all, miss an element of continuing clinical responsibility in their work and feel the lack of direct referral to them; involvement in intensive therapy and the pain clinic can compensate for this. General health need not be...
undermined; the causes of death among anaesthetists, as reviewed in the United States, show a slightly lower than average (for doctors) incidence of myocardial infarction but a fair number of suicides.

It is not easy to estimate how many anaesthetists at present undertake "super-specialized" work such as cardiothoracic and neurosurgical anaesthesia. There is no doubt that there are far better prospects than formerly for anaesthetists who wish to develop and maintain special interests of this kind. Again, it is hard to know how many anaesthetists currently undertake intensive care work. The British Medical Association Planning Unit's working party on intensive care (1967) found that anaesthetists were in charge of seven of the seventeen intensive therapy units which they circularized for information. In one other unit an anaesthetist and a surgeon shared administrative control. It was felt at the time that there was not a strong case for the creation of a specialty of intensive therapy or for its development as a branch of anaesthesia. The pattern for the foreseeable future is very probably one of teamwork, in which the anaesthetist will have a large share.

The involvement of clinical anaesthetists in the management of chronic pain and the organization of pain clinics is another feature of the specialty which has grown unobtrusively during the last few years, so that in most sizeable towns there is now at least one anaesthetist with an interest in this work. There are many opportunities, in connection with pain and other problems, for the controlled study of drugs in relation to anaesthetics. At any one time the number of anaesthetists who are nowadays either planning, carrying out or analyzing a controlled clinical trial of some type must be considerable. The standard of this work has risen steadily over the years.

It has been argued that the responsibility for "clinical measurement" in a hospital should rest with the department of anaesthetics and in one or two instances arrangements of this kind have already been made. Although the Zuckerman Report (Hospital Scientific and Technical Services, 1968) envisaged the setting up of a broader Hospital Scientific Service, without specific mention of the involvement of anaesthetists, there is little doubt that the anaesthetist who has an interest in some aspects of "clinical measurement", as many have, will find increasing opportunities in the future to develop this interest.

The principal means by which the consultant anaesthetist can supplement his National Health Service income are through dental anaesthesia and private practice. Conditions for dental anaesthesia outside hospital are improving, although the general situation still causes some concern. The extent of private practice in anaesthetics varies greatly in different parts of the country. It makes considerable demands on free time, and by the time pre- and postoperative visits have been fitted in, the cost of apparatus and drugs has been allowed for, and the working conditions in some nursing homes taken into account, there are anaesthetists who feel that, at least in their circumstances, private practice is hardly worth while. It does offer the consultant the advantage of being able to stand aside from the National Health Service for a while, to see and perhaps set different standards and to spend more time with each individual patient than a busy hospital service sometimes permits. Private practice also affords an additional means of keeping in touch with common conditions and emergency procedures during a consultant career. The anaesthetist who is building up a private practice may feel that he dare not refuse any offer of a case; if he declines, or suggests a postponement, he may not be asked again. The possibility of conflict with National Health Service commitments thus exists. In general, however, attitudes and conditions are improving, so that many anaesthetists, perhaps by working in partnerships, find it possible to combine private practice with hospital work without detriment to either.

**Teaching.**

Most consultant anaesthetists are not concerned in undergraduate teaching, but there is increasing awareness of what the specialty has to offer to the undergraduate. With the large increases in the size of our medical schools it is becoming commoner to assign clinical students to Regional Hospitals. It is not in the teaching of detailed anaesthetic techniques that the specialty can help the undergraduate, but in underlining the lessons of applied physiology and
applied pharmacology, illustrating the dynamics of drug uptake and distribution, and instilling important general information about the care of unconscious patients, maintenance of the airway, resuscitation, and the principles of fluid balance. The immediacy of the anaesthetic situation, in terms of responses to drugs and physiological changes in the patient, provides invaluable opportunities for undergraduate demonstration. The student who has learned to intubate, to ventilate the lungs, to enter veins with some facility, and to recognize sudden changes in a patient’s condition will have learned a great deal. One anticipates that in future many more consultants will have the opportunity to participate in this kind of teaching.

The general level of postgraduate teaching activity throughout the country is rising at a substantial rate. Whatever detailed plans are finally adopted for postgraduate education the anaesthetist who enjoys teaching will never be at a loss; he will be increasingly welcome in the lecture room, at the bedside, and in the theatre. Arrangements can often be made, within the terms of a consultant appointment, for overseas secondment to help with postgraduate training programmes in developing countries.

RESEARCH
Boards of Governors and Regional Hospital Boards set aside money for clinical research, the allocation usually being decided by a committee when applications have been received. Other sources of research money are open to National Health Service consultants and in some instances consultant appointments are combined with Medical Research Council Fellowships. It is at the discretion of Boards of Governors to include a limited number of research sessions in consultant contracts and these may be supplemented by a University contribution, thus creating a joint University/Hospital appointment. Such appointments have proved valuable for clinicians with a long continuing interest in research activity which can be pursued on a part-time basis. Such cases, however, are relatively rare. Research does not often continue at a steady, fairly low level of activity year after year. While some joint appointments succeed, therefore, there are others which lead to boredom as the research element plays itself out, and others again which lead to frustration as the research becomes more and more demanding of time and facilities.

UNIVERSITY APPOINTMENTS
The Health Service structure is broad-topped and most trainees achieve a common consultant status. The University structure is still pyramidal, with a sharp enough point to make itself felt. But in clinical subjects, Lecturers, Senior Lecturers and Readers are on the same salary scale as Professors, provided that they have consultant or honorary consultant N.H.S. status and some clinical responsibility. They may also hold distinction awards. But although progress has been made, it is still difficult for Universities to compete on equal terms in attracting and retaining the ablest people. Individuals may achieve promotion from the lecturer to the senior lecturer grade, but this promotion does not automatically create a vacancy in the lower grade; the entry of others into academic posts may thus be blocked. Furthermore, the number of places at the “top of the academic tree” is limited, and there is always the inducement of private practice in conjunction with a National Health Service post.

There has been increasing concern in recent years, particularly from those directly involved, about the amount of administrative work involved in senior university appointments. The title “administrator” sometimes seems more appropriate than that of Professor—a name which some have even pronounced moribund (Peart, 1970). This is the price that has to be paid for not having, in the universities, a bureaucracy equivalent to that of the National Health Service. It can be irksome, but also rewarding.

ADMINISTRATION
The background and the day-to-day work of the anaesthetist often put him in a position to make a valuable contribution to administration, and a number of anaesthetists have successfully entered this field either in hospital or university.

PRESENT AND FUTURE PROSPECTS

Academic posts.
Within the last decade, the number of Professors of Anaesthetics in the United Kingdom
has risen from 4 to 16, with a proportionate increase in the academic establishment in other grades. The approximate position at present is summarized in table I, which is based on a brief questionnaire sent to Heads of Departments. The response to the questionnaire was complete with the exception of one London teaching hospital, but it should be regarded as giving no more than a broad indication of the present state of affairs.

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<td>Full-time appointments or appointments shared with the N.H.S.*</td>
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* These numbers do not include the numerous consultant anaesthetists who hold honorary senior lectureships or lectureships, while devoting essentially the whole of their time to hospital work.

In the questionnaire, inquiry was also made about forthcoming vacancies in the various academic grades. From the replies it would appear that there may be 5 or 6 Professorial vacancies during the next 5 years, although this includes 3 Chairs which are at present merely proposed or under discussion (2 Professorial appointments have been made during the writing of this paper). Other projected vacancies during the next 5 years include:

- 2 Readerships (1 currently non-medical)
- 19 Senior Lectureships or First Assistantships
- 29 Lectureships
- 3 Junior Lectureships or Demonstratorships
- 42 Research Assistantships

Some of the more junior of these appointments are not, of course, usually held for 5 years and the figures include repeat vacancies during the 5-year period.

There is clearly considerable movement from university posts to National Health Service posts, and vice versa; the university "ladder" has both vertical and lateral communications; only about half of the 14 Professorial appointments which have been made in recent years have been from academic posts, the remainder having been from National Health Service appointments.

Clinical prospects.

In September 1969 there were 1,184 consultant anaesthetists in post in England and Wales, 41 S.H.M.O.s and 62 Medical Assistants. There were 659 other doctors (mainly General Practitioners) contributing 146.7 whole-time equivalents of work in anaesthetics.

Of these 1,184 consultants, 986 (83%) were born in Great Britain, 61 (6%) were born in Northern Ireland or Eire, and 137 (12%) were born elsewhere. At the same time, there were 188 Senior Registrars in post in England and Wales and the distribution with regard to place of birth was closely similar. The comparable figures for Registrars, however, showed a total of 574, of whom 251 (44%) were born in Great Britain, 10 (2%) were born in Northern Ireland or Eire and 313 (54%) were born elsewhere. Eighty-five per cent of consultants and 79 per cent of Senior Registrars were male; in the Registrar grade, 67 per cent were male.

It is possible to make some estimates of forthcoming consultant vacancies by looking at the age distribution of existing consultants. The 1969 Return showed that 14 Consultant Anaesthetists were 65 years of age or over, 88 were between 60 and 65, and 161 were between 55 and 59. On this basis, there would be about 100 vacancies during the next five years. To this may be added an estimate for the growth of the specialty (about 4 per cent, for trained staff) and certain other more-or-less reliable predictions relating to such factors as the loss of economically active doctors by emigration (currently estimated at 400 a year for all specialties) and the loss of work by women medical graduates which may be estimated at approximately a third at ten years after graduation. Further assumptions depend on the future pattern of postgraduate training, the ability to attract graduates to the specialty and other imponderables. Altogether, realistic forecasts are difficult to make with any precision, but it is clear enough that there will be a substantial number of consultant vacancies in the next few years.
Between October 1968 and October 1969, 75 consultant appointments were made in anaesthetics in England and Wales. Of the people appointed, 29 were between the ages of 30 and 35, 33 were between 35 and 40, 9 were between 40 and 45, and 4 were between 45 and 50 years of age.

Of the 188 Senior Registrars who were in post in September 1969, 3 were over 45 years of age, 6 were between 40 and 45 years old, 56 were between 35 and 40, 112 were between 30 and 35, and 11 were under 30 years of age. The department of Health regarded 184 of the Senior Registrars as being “in training”; of these, 84 had been in posts less than one year, 61 between 1 and 2 years, 22 for between 2 and 3 years, 13 for between 3 and 4 years, 2 for between 4 and 5 years, and 2 for more than 5 years. A similar breakdown of the duration of appointment of the 574 Registrars in post shows that 255 had been in posts less than 1 year, 138 for between 1 and 2 years, 89 for between 2 and 3 years, 32 for between 3 and 4 years, and 57 for more than 4 years (the tenure of appointment in three cases was unknown); thus, 30 per cent of registrars are known to have been in post for more than 2 years. Of 485 senior house officers, 278 had been in posts for less than a year, 126 for between 1 and 2 years, 45 for between 2 and 3 years, 19 for between 3 and 4 years, and 13 for more than 4 years (in 4 cases the tenure of appointment was unknown). Altogether, therefore, 42 per cent of senior house officers are known to have been in post for more than 1 year.

Not all the established posts in anaesthetics are currently occupied. In September 1969 there were altogether 211 vacant posts of various grades, of which 125 were consultant posts and 27 were senior registrarships. Ninety-one of the 125 vacant consultant posts had been without a permanent occupant for more than 6 months; most of these posts had been occupied by long- or short-term locums, but 11 were not occupied at all.

The figures for Scotland show that during the years 1970–74 10 consultant anaesthetists will be due to retire. There will be a further 15 retirements during the years 1975–79. It is estimated that the expansion of the specialty during the years 1970–74 will provide an additional 17 consultant appointments. The average number of posts to be filled during each of these 5 years would therefore be 5.4. To this may be added an estimate for the loss of economically active consultants from the National Health Service in Scotland, from various causes, at a rate of about 1.6 a year, so that the total recruitment to the consultant grade may be expected to run at approximately 7 a year. Assuming that senior registrars remain in post for 4 years, it would require a senior registrar establishment of 28 to supply this consultant need. In fact, the senior registrar establishment in anaesthetics in Scotland for 1970 is expected to be 31.

CONCLUSIONS

There is considerable food for thought in these figures, although it is evident that the able and enthusiastic trainee need have few worries about his future. In more general terms, however, the progress of the specialty—which means the ability to attract and retain good trainees—depends upon proper conditions of work, a fair allocation of distinction awards and the opportunity to develop interests outside the operating theatre. This itself requires adequate staffing at all levels; otherwise the theatre workload becomes overbearing, other activities suffer and recruitment, in turn, becomes difficult. If our “critical mass” of active anaesthetists continues to grow the future has much to offer.

ACKNOWLEDGEMENTS

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REFERENCES

Hospital Scientific and Technical Services (1968). London: H.M.S.O.