ADULT MEDICAL EDUCATION OF THE ACADEMIC CLINICAL TEACHER AND INVESTIGATOR

BY

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A schoolteacher once said to me: "I don't know how you doctors keep it up, I've forgotten all I learnt at the university." The answer is simple: continuing experience in the clinical field and responsibility for vital decisions compel the conscientious doctor to strive to keep abreast. The system in this country of frequent reference by family doctors to trained specialist consultants is really a continuation of clinical teaching for the general practitioner, who can thus maintain an awareness of the modern practical outlook on the problems of the patients for whom he is responsible: personal contact with, and letters and reports from, his local or central consultant hospital staff are continuously available for instruction and interchange of new ideas.

Experience at the Postgraduate School

How do our consultants themselves keep up to date? The methods are: (1) by team-work, (2) by external contacts, (3) by reading, (4) by research, and (5) by teaching.

Team-work

The days of the self-sufficient complete comprehensive physician or surgeon are over. While every consultant physician may and should grasp the principles and ideas underlying the continuous revolution of outlook in practical medicine, mastery of the growing technological complexity is certainly beyond him. We can all recognize the history and physical findings in gastric ulcers, but any gastroscopic opinion required must be given by an expert who has mastered the technique and who has seen hundreds. Our own medical wards are staffed by "physicians" (not, "cardiologists," etc.), each of whom takes full responsibility for the basic business of history analysis and complete traditional physical examination. After completion of this basic examination he may apply his specialist technological skills in *one* specialized direction. He is backed by colleagues of similar broad clinical competence but with particular skills in diversified fields whose help is freely sought for detailed aid in the other major specialties.

In addition to frequent bedside consultations, a joint meeting of all staff (physicians and junior staff, pathologists, biochemists, radiologists, etc.) is held once a week for presentation and mutual discussion of outstanding clinical problems of special interest or difficulty. In this manner three objectives are fulfilled: (a) concentration of all locally available skill and knowledge in the interests of the patient; (b) sharing of clinical experience; and (c) mutual teaching, interchange, and criticism of new techniques, tests, and interpretations. In addition to these formal staff interchanges, joint sessions of clinical "firms" with radiologists and pathologists, including attendance of clinical staff involved at all post-mortem examinations, are regarded as duties of major importance.

External Contacts

Perhaps 300 medical teachers from home and abroad pass through the Postgraduate Medical School in a year giving didactic lectures or discussing and talking with various specialized or research groups. Our staff travel widely to other academic centres in Europe, the Commonwealth, and America. Such personal contacts, supplemented by the exchange of younger trainees on research fellowships or

clinical appointments, bring in a wealth of medical first-hand news, which is spread and discussed among all interested staff. Meetings of specialist societies at home and abroad complete these contacts on a more formal basis.

Reading

Sir William Haley, in a recent broadcast, estimated that, digesting and absorbing 100 pages an hour, an intelligent reader could get through about 5,000 books in an active adult working life-time of 50 years, and to avoid waste he must be selective. World production of medical journals makes a pile 1 foot high a day, towering to 365 feet in a year, and the pace is accelerating (Flaxman, 1954). The reader's task at first sight appears hopeless. Fortunately (or unfortunately) most of the writing is of a repetitive character—innumerable articles saying much the same thing, with dotting of i's and crossing of t's, and mainly intended for local consumption. As a basis for keeping up to date in reading I suggest: (1) Good monographs: these are usually only a year out of date on publication, but may soon be anything up to five years behind. (2) Torn-out annotations, leaders, and articles from the *Lancet* and *British Medical Journal*, stored in appropriate filing boxes (mutilation is regrettable, but libraries can be used for bound copies). (3) Some carefully selected reprints (requested by letter please and not printed postcards). (4) One or two specialist journals in fields of particular personal interest. (5) Do your reading and revision in relation to actual clinical problems. This helps to fix things in the memory.

Collective reading groups or journal clubs of about a dozen members of varied medical interests are of value for presentation and mutual discussion of interesting matters which would otherwise escape notice.

Research

Research is a hackneyed word these days. Publication may be regarded by some as necessary for prestige. Abhorring such base motives others see virtue in silence, and some even believe that research reduces clinical competence. The latter view is as disastrous educationally as the stupid parental request, "Don't teach him any poetry, he is going to be a grocer!" Admittedly, quantity of publication sometimes threatens to reduce quality, and unseemly scrambling for priority can diminish the exercise of thought so necessary in placing new data in proper perspective. Nevertheless, every teaching physician and consultant should maintain his claim to expert knowledge by personal research. Some may take the pace slowly, patiently accumulating valuable information over years, others may be more rapidly productive. Some may use esoteric laboratory techniques while others contribute equally or more valuably by simple documentation and arrangement of clinical experience. The value of research in keeping up to date is that it promotes a critical outlook in a given field and it imposes a demand for valid proof of one's beliefs. Continuous revision of the theoretical basis of our work maintains medicine as a profession: otherwise we decline to a mere craft.

Teaching

The urge of consultants to instruct their juniors is not confined to the teaching hospitals, and many brilliant teachers influence their fortunate pupils in provincial centres and elsewhere. Discussion clarifies thinking. The need for logical presentation engenders lucidity, and unrecognized lacunae in knowledge may become obvious only when subjected to the critical scrutiny of a keen student body. Reference to the library for further data or additional clinical or laboratory tests are often the result of a stimulating teaching session. Repeated presentation to generations of students improves teaching technique, and keeping the account up to date is achieved only by continuous revision by the teacher himself.

I realize that I am writing from the uniquely privileged position of a ringside seat in a highly organized university

clinical school. The stimulation and education I have received from my colleagues are as impressive as their loyalty to a team which places the ideals of service to medicine above personal material gain. Jointly we share a privileged position in postgraduate education, and we have been glad to see some of our precepts followed in other centres. The value of the joint staff round and the clinico-pathological conference (for which we acknowledge our indebtedness to America) is being widely appreciated. Such meetings should be obligatory for all hospital consultants, as otherwise the vitally necessary team-spirit can never be developed. The consultant colleague never seen at such meetings is almost a dead loss; he neither educates himself nor contributes anything for the help and enlightenment of his colleagues.

The form of joint meeting used may vary from place to place. I have seen it as far afield as Christchurch, New Zealand, where it is organized round the pathologist and radiologist, who pick out the problem cases for joint discussion. Sometimes they are joint medico-surgical, and perhaps a greater effort should be made in this direction. Teaching and discussion as a stimulus should be the prerogative of any consultant anywhere responsible for the work of his juniors.

Some Ancillary Schemes

The Younger Consultant or Specialist Trainee.—Let us imagine that a young clinician wants to develop a new line of interest or research involving a technique with which he is unfamiliar, such as chromatography, isotope tracer work, or electroencephalography. These young men will usually know fairly precisely the medical centre they wish to visit to get the instruction and experience needed. Rockefeller, Nuffield, and Eli Lilly Commonwealth and Postgraduate Federation Travelling Fellowships are available for men of suitable qualifications and promise. These fellowships enable the young man to spend a year abroad in chosen research centres. The value of such *Wanderjahren* is enormous, not only in the spread of ideas but also in the promotion of international understanding and good will in the civilized world. In the international sphere there is nothing more impressive than the mutually co-operative spirit which inspires medical research. There is no national secrecy, and such competition as may exist is no more than a healthy stimulus to effort.

Basic Science Training.—It should be appreciated that there can be no basic science course suitable for *all* clinical investigators. Surgeons, gynaecologists, cardiologists, and otologists individually have the most variable basic science requirements. All doctors, however, have had at some time in their lives a training in chemistry, physics, biology, and experimental physiology. The clinical investigator should not be frightened to return to the techniques of which he once had an elementary grasp. If he has the enthusiasm and urge he may be surprised at the speed with which he can relearn the necessary technologies for his particular research interest. If he makes the right approach to an established expert he will always get encouraging help and advice.

Travel Abroad and Exchange Teaching.—For the senior worker the idea of a Sabbatical year is sometimes raised. This has obvious advantages for the non-clinical university teacher, but for the clinician continuity of observation of patients is both the basis of his knowledge and an inescapable responsibility; absence from clinical duties for a whole year is seldom practicable. Shorter absences, up to three or four months, are easier to arrange and can be extremely beneficial if used to full advantage. Places visited have to be carefully selected, and the medical academic traveller, active in research and with some message to convey, can often finance his journeys by giving lectures. Lectures in the United States are most generously paid, and it is with the deepest regret that we in this country find great difficulty in offering comparable remuneration for return visits. Let us hope that improving economic circumstances may

help to correct some of the more glaring discrepancies between the generosity of our American associates and the meagre provision on this side of the Atlantic which limits seriously two-way university traffic. Lecture tours, however, can be strenuous and exacting. It would be a wise move if more short-term travelling fellowships were made available for senior workers to spend periods of, say, six weeks as guests in foreign medical schools. More exchange arrangements should be encouraged in the universities of our own country. I have found it easier to get to know the staff and organization of some American medical schools than to know what goes on in other medical schools in London.

Widening Horizons.—So far I have dealt with strictly medical educational matters, and in this sense the recommendations are too narrow. The doctor in the community should be a cultured man. Keeping good company with educated men of widely diversified interests is one of the privileges of university life. This privilege is more readily available in provincial centres than in the impersonal vastness of London, which suffers from over-specialization and widely scattered dwelling-places. Most university teachers and investigators bring to medicine techniques and ideas from distinct or allied disciplines—anthropology, sociology, mathematics, microbiology, psychology, physics, and so forth. In these borderland subjects the teacher may have had a formal training, but often he has simply sustained a cultured interest and may be largely self-taught. Wider fields of interest in literature, history, philosophy, art, or even craftsmanship help to make a cultivated human being. These are the counter-weights to the narrowness of extreme specialization. Such men are good mixers, they can talk readily with patients from any walk of life, and they create bonds of sympathy and understanding with their colleagues and with those who seek their help.

REFERENCE

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ADULT MEDICAL EDUCATION A GENERAL PRACTITIONER'S VIEWPOINT

BY

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I am invited to make one in a symposium on adult medical education with special reference to a proposed quinquennial or decennial six- or twelve-months Sabbath for practising doctors in which to resume pupillary status and learn what they might wish to learn. I suppose I am invited partly as one with a longish, though not wide, experience of general practice, and partly, perhaps, as a product of an era of medical education now past and in danger of being forgotten.

Medical education cannot really be divided into adult and sub-adult. Quite apart from what practice may teach him, the doctor, considered as a product of education, is the resultant of the general and special schooling he has received, and this resultant will vary widely according to the proportions of the two ingredients. These proportions have changed in my life-time and bid fair to change still more. Special schooling has encroached on general schooling. The vast superstructure of technical education has pressed down the foundations on which it needs must rest until they are crumbling.

No one would pretend that at any time in medical history all doctors have been well-educated men, but fifty years ago it was possible and not uncommon to