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The Edinburgh Medical Curriculum A Personal View

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Abstract

Students who are now studying Medicine in Edinburgh are obviously unable to compare the current curricular arrangements with those that preceded the changes which took place in 1977. It may therefore be useful to recall the major defects of the previous medical course as they were identified in the Fourth Report of the Review Committee set up by Faculty in 1973. The purpose in doing so is not so much to indulge in nostalgia but more to try to assess the extent to which the present curriculum has succeeded in remedying the flaws that were then seen. It may also help the new generation of students to see the direction in which future changes may be desirable.

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COMMENTS & REFLECTIONS

THE EDINBURGH MEDICAL CURRICULUM A PERSONAL VIEW

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Students who are now studying Medicine in Edinburgh are obviously unable to compare the current curricular arrangements with those that preceded the changes which took place in 1977. It may therefore be useful to recall the major defects of the previous medical course as they were identified in the Fourth Report of the Review Committee set up by Faculty in 1973. The purpose in doing so is not so much to indulge in nostalgia but more to try to assess the extent to which the present curriculum has succeeded in remedying the flaws that were then seen. It may also help the new generation of students to see the direction in which future changes may be desirable. The main defects of the former curriculum that were reported by the Committee were as follows:

The absence of educational objectives at all levels.

A curricular structure that makes only a limited allowance for varying interests, aptitudes and rates of learning of different students.

Overcrowding of the curriculum and overloading of factual detail consequent upon departmental autonomy in curricular affairs.

Failure of the students who lack clinical experience to appreciate the relevance of a great deal of pre-clinical teaching.

Failure to reinforce science-based knowledge in the context of clinical problems in later years.

Over-use of the teaching hospital as the base for clinical teaching.

Over-dependence on the use of the lecture

as an all-purpose teaching method.

The very limited use of teaching methods which develop self-reliant learning.

The teaching and consequent examination of subjects in isolation and with over-emphasis on factual recall.

The neglect of continuing student assessment with its possibility of student guidance at a time appropriate for further remedial study.

The Committee's final and Fifth Report set out a model curriculum which tried to take account of these deficiencies and remedy them. Perhaps inevitably, the proposals were seen by Faculty as a whole as being too far-reaching. Counter proposals of a more modest nature were made and the present course emerged from the resulting compromise.

Some original major recommendations survived the blood bath. Notably the proposal for direct entry for well qualified Scottish students to a five-year course (apart from a short bridging course in chemistry) was accepted and an advisory Undergraduate Medical Education Committee (UMEC) and its daughter Phase Committees were set up and have proved useful forums in which open discussion of many curricular problems has since taken place. Sensibly used, these bodies should constitute an important means by which further improvements are made, as their members are in a position to see the curriculum from a non-departmental point of view and appreciate the checks and balances which influence and limit policies. A reversion to complete departmental autonomy in which individual departments defend their own holes and corners would signal the

re-appearance of a tyrannical syndictyism and must be resisted.

In so far as the lack of objectives is concerned, some see the statements of the overall goals of the five-year curriculum as set out in the University Calendar as being self-evident and superfluous truisms. On the other hand, in an organisation so complex as a medical school, it is an essential safeguard for its direction and purpose to be stated in unambiguous terms. The current goals reflect a comprehensive view of education in the health sciences and in health care and indicate the kind of student Faculty wishes to see graduate. They help to ensure that the courses provided are properly related to the needs of society, and that a balance is kept between science-based learning and the acquisition of the skills and attitudes needed to care for the patient as a whole, both in hospital and in the community. At the very least, they provide a reference standard against which to appeal should any narrow sectional interest become too dominant. The fact that for the previous 250 years the medical school did not define its objectives and apparently did well, is no excuse for not taking all steps to do better.

It is gratifying to find that the majority of students who responded to a questionnaire concerning the value or otherwise of the detailed objectives of Phase III found them useful. I believe course objectives need to be set out in considerable detail and should constitute a form of check-list.

Formerly the student and staff used a comprehensive series of lectures to indicate the content of courses and examinations and this practice, more than any other, led to the overuse of the large group lecture as a teaching mode in Edinburgh and elsewhere in Scotland. The restriction of the number of lectures raises the need for an alternative guide to what is relevant course material. Furthermore its provision should free the lecturer in the future from the temptation to "cover" the subject, though this lesson still needs to be learned by many teachers. Precise objectives have yet to be written for Phases I and II and some of the components in Phase III need to be elaborated further. Some of these are under way, but will only come to fruition by continued pressure and demand. While overcrowding of factual detail in lectures is still

possible, it is less likely to occur than hitherto. The situation could also be improved if UMEC exerted a greater influence over the actual content of professional examinations than it has done up to now.

There has been a modest advance in accommodating different learning rates within the standard curriculum by using the device of guided electives for individual students who have not achieved a satisfactory level of performance in clinical work. Regrettably, there are no comparable arrangements for this in the earlier Phases, though an elective period borrowed from Phase III can be made available to those who need a second attempt at the third Professional Examination.

Continuing assessment of student performance remains patchy, but performance is monitored throughout most of the curriculum and constructive advice can and is given to those who appear to be in difficulty. The most important change in the pattern of professional examinations was made in Phase III. In place of a traditional, comprehensive, end of course final examination the policy of covering the clinical ground in four separate stages has resulted in improved learning as well as providing the opportunity to resit individual parts of the final clinical examination within a standard five-year course. Those who disagree with this pattern take the view that medicine is a single comprehensive subject and that there is educational benefit in a single, end of course final examination covering all main clinical disciplines. In my view the burden on the student was enormous and its educational influence baleful and destructive. Few who previously served as examiners at this symbolic maturity rite in which overwrought students wrestled with virtually the whole spectrum of clinical practice, with the possibility of failing at the end of a six year course without the opportunity for retrieval within the standard course can seriously wish to return to it. Separation of the major clinical disciplines both for learning and assessment allow the student to think about one discipline and those closely related to it without distraction over a substantial period of time. Equally importantly, it allows the student to gain insight into the science-based aspects of the clinical subject under study, an opportunity that was largely denied him in the past and one that would be impossible to

retain should more traditional views prevail. There has thus been a partial restoration of science-based learning in the clinical years, though I believe that this has not gone far enough. Where comparison has been made in the performance in medicine with the previous curriculum the level of attainment has been consistently higher. The performance of students who sit medicine early in Phase III as distinct from later in the course is not significantly different.

Grouping of selected clinical subjects together in this way also compels departments concerned to think clearly what are the undergraduate objectives of their clinical specialties.

When these are defined precisely, overlap between the major branches of clinical work is surprisingly small, and certainly itself does not justify a return to a single conglomerate end of course examination. It can be argued, however, that there is significant overlap between clinical medicine and general surgery. In so far as this is true, there is not and never was a case for examining the student on these common aspects twice, once in medicine and again in surgery, as occurred, for example in the old curriculum. It would be better if the course and the associated examination in undergraduate surgery confined itself to those aspects that were distinctively surgical — namely trauma, burns, herniae, vascular disorders, abdominal emergencies, etc., and orthopaedics — with disorders of the breast being conducted as a part of reproductive medicine. Time could then be found in the surgical attachments for much needed experience in accident and emergency, and for the opportunity for extended practical work with wounds and fractures. Topics like cholecystitis, peptic ulceration, diverticular disease and the like are well covered in the medical attachments of Phase III and should not sit uneasily in two different teaching blocks nor be subject to double professional assessments. The fact that a minority of patients with these complaints are treated ultimately surgically is not a valid reason for including them in an undergraduate surgical course, however long established this practice has been in Britain.

It is a matter for regret that the introduction of the 1977 curriculum did not lead to a greater increase in methods of self-reliant learning. Nevertheless, while most of the first five terms are devoted to Anatomy, Physiology, Biochemistry

and Pharmacology, the teaching of which follows a conventional pattern, some of the classes in Behavioural Sciences and Clinical Correlation exercises use Problem Based Learning Projects. It is important for students and staff to gain some experience in the use of a method of learning which is believed to encourage the student himself to analyse problems by initiating and exploring appropriate relevant areas of basic knowledge. Three cycles of such projects have now been conducted and a look at the topics studied encourages the view that Edinburgh does not take a narrow or parochial view of medical education. Their catholic nature has included a study of hypothermia in the community, population control, the taking of drugs in pregnancy, to the cognitive function and cerebral blood supply. These projects are enjoyed and educationally rewarding, not least in the climax of their presentation by student groups in the Royal Medical Society. There is little doubt that opportunity for independent study should be further developed. It has to be remembered that while the student of medicine needs to know certain facts, his later professional life does not consist in regurgitating them, nor is he, as a doctor, often in a position to choose the problem he would like to solve. Patients are presented to him as unknowns and his education should equip him with the capacities to deal with this reality. Attitudes fostered by a school classroom approach to teaching and learning do not meet this need. Perhaps the greatest criticism of the present curriculum stems from the limited opportunity for clinical experience in the early years. Thus in the teaching of the medical sciences the "Learn and Forget" theory of medical education still largely prevails. Earlier attachments to clinical units (e.g. in Phase I) may be possible in the future, though these could raise practical difficulties of over-teaching on hospital patients. Encroachment on the time available for pre-clinical sciences for clinical work will, of course, be resisted. However, as a good case can also be made for increasing the opportunity for science-based learning in the later years, UMEC should not be afraid to engage in the wheeling and dealing of curricular time that may be necessary in order to achieve a curriculum in which science-based learning and clinical experience become still more concurrent than they are now.