Hull York Medical School

Training tomorrow s doctors

WILLIAM J GILLESPIE, Dean, Hull York Medical School and John B Cookson, Director Medical Education, at Hull York Medical School describe how medical school teaching is changing from depth to breadth

It has been an interesting time of change in medical education these last ten to fifteen years, and anyone entering medicine now in the UK has probably more choice than ever before in the kind of programme to go for. The differences are not in the core competencies which are expected – these are now increasingly well defined, since the publication of *Tomorrow's Doctors* in 1993 by the General Medical Council. This was quite a radical document which set out to address some of the problems which had accumulated over the second half of the 20th century.

It signalled a change in the balance of medical curricula from simply accumulating factual knowledge about the disciplines of medicine to a learning process that emphasises also the development of skills to interact with patients and colleagues, and the ability to evaluate data. It was acted on with some alacrity, not necessarily because every medical school wanted to see change, but perhaps because a penalty for failure to change was, if not explicit, strongly implied.

The way it used to be

Students in the mid-20th century (two of whom are the authors of this article) were exposed to undergraduate curricula whose focus, structure and modes of delivery had changed little since 1890. The first three years at medical school were spent in lectures, laboratories, and dissecting rooms learning in detail the structure and function of the human body, taught in discipline-related courses (anatomy, physiology, and biochemistry). These courses made little or no attempt to show the links between structure and function or to illustrate the connection with the practice of clinical medicine. Designed and delivered as self-contained courses, their content was determined by people whose

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professional lives had been spent in their discipline, whose enthusiasm for its importance, details, and rosy future was impressive, but whose knowledge of the changing world of medical care was negligible. Communication skills, social science, human behaviour, and rational resource use were not on the agenda.

Clinical medicine was little different; teaching and learning were almost exclusively in large teaching hospitals and "craft-based" in structure and content. The focus was often on the kind of treatment (pills or the knife) rather than the patient and best way to treat their illness. On graduation, young doctors were pitched into the work place having learned a great deal of detail which they would never use, and not learned anything whatever about some of the competencies which they would need every day.

The present environment

The changes in medical undergraduate programmes have sought, through changes in the learning environment, to improve integration between disciplines and themes within each programme, and to encourage teamwork, and individual professional development. The drive for integration and the need to increase the breadth and limit the depth of undergraduate learning have led to the strengthening of central ownership and planning, and to some extent delivery, of curricula. This has led to structural changes in medical schools, and to the disappearance through merger of many discipline or "craft"-based departments.

Integrated learning

Horizontal integration is blurring the barriers between different disciplines particularly in the basic sciences. This may mean that it is more difficult for students to see the inherent integration within each discipline. Whether this is true, and if true in the early stages, whether it matters in the long run, remains a matter of debate.

Vertical integration provides clinical experience in the early years of the course, and strengthening of the application of basic science precepts into the later years. Most schools now programme clinical placements from the first year. The nature and purpose of this experience needs to be carefully integrated to avoid the danger that it becomes "a visit to the zoo" where students get relief from the perceived drudgery of pre-clinical subjects by seeing real patients, but remain essentially observers of the process. Our own school has had some success in integrating clinical exposure into the rest of the course by ensuring that the real patients seen on clinical placement (a weekly event) mirror as far as possible the "virtual" patients considered in problem-based learning groups. Clinical tutors watch students interacting with patients rather than the students watching the tutors with patients.

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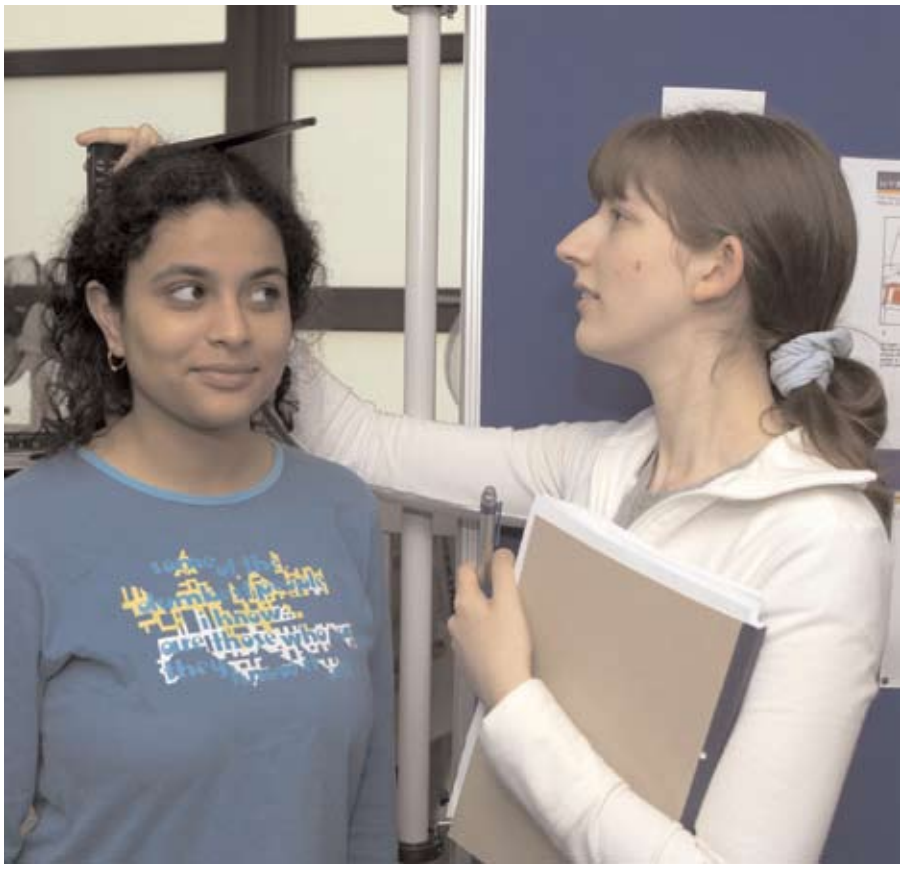
Integrating basic science into the clinical placement experiences, which dominate the later years of undergraduate medical programmes, has proved more difficult for all schools; we are still unsure of how it may best be done. But it clearly can be done, and should be, since revisiting basic science in the light of increasing clinical experience is something that every practising doctor needs to do.

Most new medical schools in UK, and a significant proportion of longer-established schools, use problem-based learning (PBL) in some form or another. PBL uses patient stories as a vehicle to integrate science learning. It complements, but does not replace real clinical experience. It provides a framework for integrating learning across all the sciences and skills which form the basis of health care; it also introduces the benefits, responsibilities, and difficulties associated with working in groups at the same time as taking significant responsibility for one's own learning. The debate over whether it "works" has probably run its course. Although there is no striking evidence of superiority over other methods in terms of competency in the years after graduation, it is certainly no worse than traditional approaches. Graduates of PBL schools do seem to be better at putting their knowledge into practice and using evidence to back up their decisions; they also seem to enjoy their education more.



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High quality clinical placement experience, whether in hospitals or in the community, is fundamental to good medical education. The UK has a good record in this area but at the end of the day there are few votes in medical education, and the present financial turbulence in the NHS is a potential threat to the quality clinical experience for all health professional students. However, in a managed health-care environment with clear identification

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of funding streams for education to protect service delivery, and robust management procedures to prevent teaching time being eroded by service demand, it has proved possible for the new UK medical schools to establish good placement programmes with substantial community experience.

Today's transport systems and sophisticated electronic learning support allow students to make use of this rich learning environment where 90 per cent of health care is delivered. Many UK medical schools are now providing increasing amounts of primary care (general practice) experience in their curricula. It has been easier for the new schools, including ours, as the funding can follow the students; in older-established schools where the educational funding has gone to teaching hospitals for many years it is difficult to move it out without affecting established provision of hospital care.

Future direction

It would be foolish to think that change will not continue. The need to provide value for money in health care has resulted in experimentation with the training of medical assistants with a more limited range of skills than those currently expected from doctors. It isn't yet clear what direction these developments will take in the future, but they do signal a need for careful reflection about the future direction of health care education in general and medical education in particular.

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