There have been many changes in medical education over recent years as the scope of modern medicine has altered and the national health service (NHS) and the universities have had to respond to this. The continuous advance of medical knowledge and practice has created a pressure to increase and modify the content of the undergraduate syllabus, but further expansion is unsustainable within the limits of the current duration of the undergraduate course. Hence, the emphasis of undergraduate medical education in recent years has been on ‘life long learning’ and the ‘core curriculum’.2

Within our specialty we regard the teaching of trauma and orthopaedic surgery (T&O) and the diagnosis and management of musculoskeletal disease, in their broader context, as being ‘core’. We will, however, need to justify this view to our colleagues from other specialties who also consider their interests, vested or otherwise, as being in the same category. Following the implementation of the Campbell report3 there will be an increase in the number of ‘preclinical’ students due to start their courses in 2001. This will result in more clinical students reaching the wards in the next five years. The additional 1000 students per year will not be equally distributed across all the medical schools. The increased numbers will have a substantial impact on many academic departments and on their ability to provide quality teaching to the next generation of doctors, some of whom need to be encouraged to become our colleagues and follow in our footsteps. These departments will bear the brunt of this increased requirement for teaching at a time when they are already stretched because of the unreconcilable demands of the universities through the Research Assessment Exercise (RAE) and of the NHS for clinical excellence by clinical governance.4

Most university departments have been involved in the Quality Assurance Agency (QAA) assessments of the quality of teaching, often linked to the normal inspections by the General Medical Council (GMC). The QAA reviews are rigorous, time-consuming and very demanding of those involved in the organisation and provision of teaching. At present, their findings do not affect directly the levels of finance which the universities receive for students, but it is highly probable that they will soon influence the funding of departments and universities in a similar way to that of the RAE. As orthopaedic surgeons, we will need to respond to the dual demands of increasing numbers of students and an increased focus on ‘quality’ in teaching. This may not be possible within the current structure of many undergraduate programmes in T&O. In my own university the numbers of students are increasing from about 200 to 290 per year. This equates to another nine students for each monthly rotation who have to be accommodated and taught. One option which is being proposed by a number of medical schools is to increase the amount of clinical teaching based in general practice. Many orthopaedic surgeons have grave concerns about the quantity and quality of instruction in T&O which will be available in this setting. Another, more worrying, view is that T&O is solely a postgraduate subject which should not feature in the undergraduate curriculum; all that is said to be required at this level is some cursory knowledge within the general scope of ‘chronic disease’.5

Musculoskeletal problems form a major part of clinical practice and constitute at least 10% of consultations in general practice. This is a substantial amount of clinical contact and is likely to increase as the population becomes older and more time for leisure is available for the younger working population. This has been emphasised by the designation of the years 2000 to 2010 as the ‘Bone and Joint Decade’. It would therefore seem appropriate that the diagnosis and management of common musculoskeletal problems should form an important part of the ‘core’ curriculum of any undergraduate medical training programme. Reports from Canada, however, suggest that only 12% of their clinical schools have mandatory teaching in musculoskeletal disease. Ten years ago it was estimated that approximately 6% of undergraduate time in the UK was devoted to musculoskeletal teaching and only 10% of vocational training schemes (VTSs) for general practitioners included orthopaedics.6 The implication was that teaching in musculoskeletal subjects was under-resourced with inadequate time allocated, and that for most general
practitioners this was not remedied during their postgraduate VTS.

In 1999 I carried out a postal survey of all the medical schools in the UK, including Northern Ireland, to enquire as to their teaching in T&O. Twenty-one of 23 replied. The average time devoted to attachments was five weeks. All but two programmes, however, were combined with other clinical subjects, usually rheumatology (60%) or accident and emergency medicine (A&E) (20%). Other subjects included ENT, anaesthetics or neurology. The dilutional effect of this resulted in the average duration of the attachment to T&O being reduced to 2.7 weeks (1.5 to 6). All the modules in orthopaedic surgery, except one, included trauma within the curriculum. This 2.7 weeks represents 2% of the available teaching time in the three clinical years (years 3 to 5). If A&E and rheumatology are included, musculoskeletal teaching represents just under 4% of the curriculum. This figure has fallen from the 6% in 1990.11 The length of the average course is below the six weeks which was recommended by Norris.12 In addition, such short exposure to a large subject may encourage superficial learning which medical education is specifically trying to avoid.12,13 One of the main goals of the ‘Bone and Joint Decade’ is to ‘influence the training programme in medical schools to include at least six months of exposure to musculoskeletal disorders with the aim of improving the diagnostic skills of general practitioners.’14

A separate survey of the musculoskeletal content of the four VTSs in Northumbria, Cleveland and East and West Cumbria was carried out. All had rotations which included A&E, but not for every trainee. No scheme had a placement in either rheumatology or orthopaedic surgery although some exposure to the former occurred during attachments in general medicine. All schemes had some musculoskeletal teaching during day-release courses.

My survey showed that for most doctors entering general practice undergraduate instruction represents their entire clinical teaching in musculoskeletal disease. There is an increasing discrepancy between the amount of time devoted to musculoskeletal/orthopaedic teaching and the number of consultations in general practice, which is not made up during VTS placements. If the predications, from the inaugural meeting of the ‘Bone and Joint Decade’, of increasing musculoskeletal problems are correct, this discrepancy will rise during the working lifetime of the students currently in training.7,8 The amount of exposure to musculoskeletal problems for doctors entering non-surgical hospital practice is no better, since only a limited number will spend time in rheumatology or a similar specialty.

With increasing numbers of students, it is vital that the teaching of musculoskeletal disease at undergraduate levels does not suffer due to problems of manpower. Many of the replies which I received from Heads of Departments expressed concern about the difficulties of maintaining standards in teaching in the face of increased pressures from the universities on their academic staff and from the NHS on clinical consultants. Little consideration appears to have been given to the provision of quality education in musculoskeletal disease for the increasing numbers of students.3 The shortfall in resources devoted to the teaching of musculoskeletal problems will have a negative effect on the quality of management and referrals of these disorders and on recruitment into the appropriate specialties, particularly orthopaedic surgery. We must ensure that our views regarding the importance of teaching in T&O as being ‘core’, backed up by the theme of the ‘Bone and Joint Decade’, are heard in the medical schools. It is essential that we provide teaching of high quality to the next generation of doctors who are going to require the knowledge and skills of T&O in their working lifetimes more than ever. If we are to provide the current medical students with the amount of teaching time which is indicated by the importance of T&O in clinical practice, and be able to keep up the quality as their numbers increase, we will need to devote more human resources to this. More hours of teaching will be required, either from academic sessions funded directly through the universities or from the NHS time paid for via the SIFT monies.

References