Specialist training in rheumatology—the need for a curriculum and assessment

In the last two years a quiet revolution has occurred in UK Medical Schools. Medical education is being taken seriously and the mood in the Schools is one of excitement and optimism. Changes that are being implemented relate both to the curriculum content and to the methods of teaching and assessment (table). This successful change in attitude and practice largely results from the General Medical Council (GMC) Education Committee’s strategy of inviting all Medical Schools to respond to their 1991 discussion document. The large body of research relating to teaching methodology, student dissatisfaction and junior doctor requirements meant that the subsequent debate on undergraduate teaching could be focussed around data as well as philosophy. Furthermore, the widespread involvement of all interested parties meant that a true consensus could slowly emerge. Medical education, however, is a continuing process. So having started successfully to tackle the undergraduate programme, where are we now with specialist training?

Current activity
A large number of committees have specialist training and accreditation on their agenda. Issues for rheumatology are being considered within the broader contexts of general professional training (GPT) and the accepted need for more comparable standards of specialist expertise within Europe. In the UK the GMC issues the Certificate of Completion of Specialist Training (CCST) but is duly advised by the Joint Committee on Higher Medical Training (JCHMT) with its Specialist Advisory Committees (SACs). In Europe the Advisory Committee on Medical Training, appointed by the Council of the Member States, reports to the European Commission. An important feeder committee is the Union of European Medical Specialties (UEMS) which receives advice from Monospecialty Sections including Rheumatology. Representatives on many of these committees communicate with the national Rheumatology Societies and EULAR.

Examples of issues currently debated by these groups are: the clinical remit of a ‘rheumatologist’; the appropriate duration of the training period; the minimum number of procedures (for example, knee aspirations) to be undertaken during training; and requirements for approval of training centres. Wise decisions will hopefully emanate from these committees. However, given the importance of such issues, is sufficient time and expertise being devoted to their deliberation? Importantly, what data are there to guide any redesign of training programmes in Europe, and what educational philosophies are being applied?

Most discussions at open meetings, as opposed to closed committees, regrettably reflect a ‘top-down’ rather than radical ‘bottom-up’ approach to these issues. The temptation of course is to modify what is in place rather than start afresh and design a system around the educational aims and objectives. For example, discussions on the duration of training centre on the pro’s and con’s of existing schedules with attempts to derive a politically acceptable compromise close to the median value. Established schedules, however, derive more from historical accident than educational design. Duration of training can only properly be calculated once factors such as curriculum load, teaching methods and learning capacity of trainees are known. Similarly, discussions on what constitutes an approved training centre focus on variables such as the number of journals in the library, faculty size, the turnover of patients and the number of beds; the desired scenario often being stated in numerical terms that conveniently reflect established centres. But has anyone studied whether such elements or numbers correlate with learning? Does the mere availability of journals mean that trainees will read more, and if they do, will it benefit their training? Surely the more important issues are the quality of teachers, the time dedicated to training and the success in achieving clearly stated objectives.

Designing a training programme
The basic principles involved in training specialists and educating undergraduates are very similar. Although
training (acquisition of specific skills) may be distinguished from education (an important value base, broader in concept), both are required for medical practice and both need inclusion in postgraduate programmes. The three key elements of programme design are represented in fig 1.

1 Curriculum
This should reflect the practical requirements of the qualifying specialist and clearly delineate the aims and objectives of the course. The content should emphasise commonly required competencies (clusters of skills, attitudes and knowledge) that properly equip the trainee for the job ahead. Clear delineation of what the course is to achieve—the 'final product' that will leave it—is obviously vital. Aims or goals are broad statements that describe desired attributes (the direction in which the student will be led) whereas objectives are precise, individually achievable steps (alterations in behaviour) that allow progression in the right direction. Instructional objectives should be regarded as a contract between trainer and trainee that describe what trainees will be able to do at the end of the course that they could not do at the beginning. In such a contract regular audit is important. The curriculum should be subject to assessment, review and readjustment to fit the changing needs of the specialist and the community.

2 Teaching method
This should be the most efficient means to facilitate the required learning by the trainee.

3 Assessment
This measures the effectiveness of the teaching programme in achieving its objectives. Formative assessment permits both trainee and trainer to assess progress and itself may be a learning process. Summative assessment may be secondarily used as a yardstick to compare performances between centres and to ensure attainment of an agreed standard.

In an ideal situation the following conditions will apply:
- aims and objectives are known to both teachers and trainees
- teaching is structured and efficient in terms of time and cost
- teaching centres on the stated objectives
- trainee-centred learning predominates
- assessments accurately reflect the curriculum content.

Problems with any of the three key elements may result in a variety of 'mismatches' and poor programme cohesion (fig 2).

The current situation in rheumatology
If trainers and trainees were asked to identify which scenario in fig 1 best approximates to their programme the vast majority would probably opt for one of those to the right (many might additionally link UK junior medical training—Membership of the Royal Colleges of Physicians—with number 5). Current rheumatology programmes perpetuate the apprenticeship system popularised in the last century. They have little or no educational objectives, structured teaching or formal assessment. Defenders of the current system argue that it offers abundant clinical experience in a supervised setting, so that by the end of training all important competencies have been encountered and learnt. Also the closeness of supervision permits trainers to appraise trainees with no need of objective assessment. After all, who can define what makes a good specialist? Surely the trainer’s opinion is as good as any ‘exam’ and avoids the problems of candidate nerves, organisation logistics and expense.

Cynics, of course, would retort that defence of the current system is intertwined with: dependency on the trainee’s service commitment; unwillingness of trainers to dedicate time to structured teaching; ignorance of educational methods; and insecurity concerning scrutiny of their protegè’s calibre. It is the Catch 22 situation of the trainers being products of the system they now operate. Having never experienced structured training, and having never been instructed on how to be a trainer, it is hardly surprising that most of us know little of course objectives, structured programmes and objective assessments. Nevertheless, trainers must now demonstrate the merits of their system if they wish it to remain unchanged. Certain elements of current training may well be excellent but hearsay evidence and opinion alone are no longer tenable. We need clear data on which to justify our training programmes.

The way forward
The development of an agreed curriculum would seem an obvious crucial first step. Without this there can be no meaningful discussion on the requirements or merits of any training programme. The core curriculum needs to be generally agreed and should reflect the minimum requirements for first year specialists in a setting of continuing medical education. Flexibility in training is important to permit development of individual interests and to produce different 'end products' for differing health care needs. Individual centres may thus build additional objectives around core requirements, offering would-be trainees a variety of detailed published programmes.

The second step is acceptance of the need for assessment as the only sure way of measuring the success of a programme in achieving its aims and objectives. Both formative and summative assessments are desirable, the latter being uniform between centres (national or European 'Boards'). Of course, assessment relates to trainers as well as trainees. It offers the best index of the suitability of a centre for specialist training. Performance in summative assessment could replace 'visitation' by

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**Figure 1** The three key elements in a teaching programme. Each should link with and reflect the other.
Specialist training in rheumatology

Figure 2 Programmes that fail to provide one (2–4), two (5–7) or all (8) of the three key elements in an integrated and cohesive system (1).

regulatory body representatives (the SAC in the UK) using presumptive assessments based on numbers of staff and facilities rather than performance.

Once a curriculum and assessment are in place different methods of delivery could be properly compared. The time it takes to complete training (that is, learn stated objectives) would be measurable rather than guessed. It is likely that training time would vary between centres, being dependent on the efficiency of teaching and the number and type of additional objectives. Trainees will also vary in the time needed to learn competencies. Such variables should be recognised and accounted for rather than hidden within an imposed single time period. It should also be recognised that training times may vary between medical specialities and that development of competence in two specialities (for example, rheumatology and rehabilitation) should take longer than monospeciality training. 

Curriculum load should replace 'career stage' as a determinant of training time.

Much of what is at the heart of the undergraduate teaching revolution is applicable to 'older students'. The same strategy used by the GMC to catalyse reshaping of undergraduate education might also prove successful for specialist training. The current debate on rheumatology training, the educational issues involved and the requirement for further data could be compiled into a discussion document and disseminated to all interested parties (including trainers). This should stimulate critical re-examination of our current practice and encourage appropriate educational research and audit. The subsequent wide debate should enable a true consensus to be reached, and importantly, prepare trainers for the changes that evolve. Such an open approach is surely preferable to closed committee discussion. The implications of restructuring our training programmes are important for the whole specialty. We should all share in its development. Whether such an initiative should be led by EULAR, the national societies or advisory committees is immaterial. Rheumatology training is on each of their agendas and they are all competent to present the arguments.

As structured training programmes evolve, a number of radical changes might be envisaged. For example, trainees are likely to become truly supernumerary with respect to service commitment. They might attend regular day release with other trainees in their region to learn specific instructional objectives. Rather than 'practising' examination skills and practical procedures in a haphazard, self-taught fashion, trainees may learn from their trainers in structured (for example, ATLS) teaching sessions, perhaps using injection models as well as patients. The need for active research during training may be questioned—inclusive teaching on study design and data analysis may permit abbreviation or even elimination of time spent on poorly supervised research. National societies and entrepreneurial groups may vie for audiences at training courses that tackle core objectives by trainee-centred learning. The opportunities to develop our training programmes into truly professional, educationally sound systems are numerous. Hopefully, the growing enthusiasm for applying modern teaching principles and methodology will spill over from the undergraduate to postgraduate programmes.

Changes such as these of course will have their price. Trainers will need to devote more time to planning and delivery of training and accept a change in trainee status from 'assistant' to 'learner'. Appropriate assessments also need organisation and time. Trainers themselves may require education to develop their training skills. Good professional training, however, is not cheap. If we want excellence in rheumatology we will have to pay in terms of time, energy and money.

"If you think education is costly, try paying for ignorance" (Groucho Marx).

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