Teaching rheumatology to medical students: current practice and future aims

ABSTRACT—Rheumatological disease is common but is often overlooked or inadequately assessed by doctors. This may reflect training in the discipline. The results of a survey of all British medical schools by the Arthritis and Rheumatism Council and the British Society for Rheumatology show that clinical rheumatology teaching forms a small part of most courses (median 4, range 0–8 weeks), usually as a second-year specialty attachment, and that specific assessment of basic clinical skills in rheumatology is often not undertaken. The results of the survey support the idea that the current teaching of rheumatology might help to marginalise the subject rather than to promote it.

Rheumatological disease is a major source of morbidity both in the community [1, 2] and in patients hospitalised for other reasons [3, 4]. As many as ten per cent of new general practitioner consultations are for musculoskeletal problems [2], and 43% of medical patients in hospital have rheumatological complaints [3, 4]. There is evidence that much of this morbidity is being missed [4], and that this is not confined to trivial or non-remedial problems. It represents a missed opportunity for health intervention, and may lead to delayed discharge from hospital. The reasons why the locomotor system is 'overlooked' are unclear but may include lack of awareness of rheumatological problems [4–7] or poor basic skills [8, 9]. A previous survey of qualified medical practitioners demonstrated a low priority for undergraduate rheumatology training with an associated lack of perceived need [7], though contrary views have also been expressed [4–6, 9–14].

Apart from a need to produce the desired but poorly defined 'good doctor', the aims of medical education and the assessment of its achievements are fraught with difficulties. The number of specialties is increasing and each competes for time within an already overcrowded curriculum. Relative allocation of time often seems to have resulted from historical considerations rather than direct planning. The World Health Organisation [15], the Arthritis and Rheumatism Council [5, 6] and the International League against Rheumatism [10] have all emphasised the need to produce graduates who are competent in basic skills and ready for further training.

To determine the current level and emphasis of rheumatology teaching within British medical schools, the British Society for Rheumatology (BSR) and the Arthritis and Rheumatism Council (ARC) have surveyed all medical schools concerning their level of

ADRIAN JONES, BSc, MRCP, *Arthritis and Rheumatism Council Research Fellow, City Hospital, Nottingham*
PETER MADDISON, MD, FRCP, *Professor of Bone and Joint Medicine, Bath; Past Chairman of Education Sub-Committee, British Society for Rheumatology*
MICHAEL DOHERTY, MD, MRCP, *Senior Lecturer, City Hospital, Nottingham; Chairman of Education Sub-Committee, Arthritis and Rheumatism Council*

Table 1. Lecture-based teaching. Summary of some of the results of the BSR/ARC survey of rheumatology teaching.

Medical school	Specific teaching	Pre-clinical	Clinical years 1st	2nd	3rd
Aberdeen	+		+		+
Belfast	+	+	+		+
Birmingham	+	+	+	+	+
Bristol	+		+		
Cambridge	+	+	+	+	+
Charing Cross /Westminster	+	+	+		
Dundee	+		+		+
Edinburgh	+	+	+	+	+
Glasgow	+				+
Guy's/St Thomas's	+		+		
King's	+				+
Leeds	+		+		+
Leicester	+		+		+
Liverpool	+		+		+
Manchester	+		+	+	+
Middlesex/UCH					
Newcastle	+	+	+		
Nottingham	+	+			+
Oxford					
Royal Free					
Royal London	+	+	+	+	+
Sheffield	+	+	+		+
Southampton	+	+			+
St Bartholomew's	+		+	+	+
St George's	+		+	+	+
St Mary's	+		+		+
Wales	+	+	+		

teaching. Comparison is made with previous surveys conducted in 1971 [5] and 1979 [6].

The survey

In 1990 a questionnaire was sent to the administration department of the 27 British medical schools regarding the timing and amount of rheumatology teaching within their curriculum. A copy of the completed questionnaire was then returned to the local rheumatology department for verification and correction by a senior clinician. There was a complete response to the survey and a number of course organisers added expanded answers with inclusion of their current curriculum. Principal results for each school are shown in Tables 1 and 2.

All schools offer rheumatology teaching in the curriculum. However, in three it is purely lecture based, and in a further two not all students pass through a clinical attachment. Preclinical exposure to rheumatological teaching appeared to occur in only 37%, and specific clinical teaching occurred in the first clinical year in only 37%. Rheumatology was linked with general medicine in 19%, with orthopaedics in 48%, with orthopaedics and rehabilitation in 7%, and with rehabilitation alone in 4%. In 11% it was taught as an isolated subject. The median length of attachment was four weeks (range 0–8). Specific rheumatological knowledge was examined in a multiple-choice format in 78%. However, formal assessment of clinical skills was undertaken in only 22%, and in only 15% did this count towards the final degree.

Discussion

Specialty teaching has been assessed by survey before [5, 6, 16]. Several problems are associated with such an approach [5,6]. For example, limited data are collected, there may be discordance between time-tabled and received teaching, quality is not measured, and accurate identification of what constitutes 'rheumatology' teaching is difficult (many relevant aspects, eg applied anatomy and immunological mechanisms, may be covered in pre-clinical courses but not identified as 'rheumatology'). Nevertheless, the amount of time-tabled teaching is likely to reflect to some extent the priority afforded to it by the local curriculum committee [5–7].

Table 2. Clinical teaching. Summary of some of the results of the BSR/ARC survey of rheumatology teaching. Year of attachment applies to clinical rather than pre-clinical years. Students exposed is the proportion of any annual intake experiencing specific rheumatological teaching.

Medical school	Specific attachment	Year of attachment	Duration (weeks)	Students exposed	Examination in clinical skills
Aberdeen	+	2nd	2	90%	
Belfast	+	2nd	1.4	100%	
Birmingham	+	2nd	1	100%	
Bristol	+	2nd	4	100%	
Cambridge	+	2nd	4	100%	
Charing Cross/Westminster	+	1st	8	100%	
Dundee					+
Edinburgh	+	2nd, 3rd	1	100%	
Glasgow	+	1st	4	100%	+
Guy's/St Thomas's	+	variable	8	100%	
King's	+	1st	8	100%	
Leeds	+	2nd	2	100%	
Leicester	+	2nd, 3rd	4	100%	
Liverpool					
Manchester	+	1st	4	100%	+
Middlesex/UCH	+	1st	6	100%	+
Newcastle	+	3rd	1	100%	
Nottingham	+	2nd	8	100%	+
Oxford	+	2nd	4	100%	+
Royal Free	+	1st, 2nd	5	100%	
Royal London	+	1st	6	100%	
Sheffield	+	3rd	6	100%	
Southampton	+	1st	2	100%	
St Bartholomew's					
St George's	+	2nd	4	100%	
St Mary's	+	1st, 3rd	4	100%	
Wales	+	1st, 3rd	5 or 8	30%	

Comparisons between the three surveys of rheumatology teaching are limited by differences in design and changes in medical-school organisation. To facilitate comparisons all figures are expressed as percentages of respondents. Although the proportion of schools with specific rheumatology teaching has increased (74% in 1971, 83% in 1979, 93% in 1990), one in five still do not require all students to have a formal clinical attachment. Such omission is surprising since musculoskeletal conditions form a significant part of general-practitioner workload [1, 2], are very common in patients in hospital [3, 4], and are the most important factor influencing disability in later life [17]. This prevalence should argue against rheumatology being regarded as a minor sub-specialty, but rather as a core component of internal medicine to which all students would be exposed early in training.

The timing of teaching has also changed little, with a concentration in the second clinical year apparently at a single point. This late exposure, either as a separate minor sub-specialty or linked with other similar subjects, may encourage marginalisation of the subject. Furthermore, the apparent lack of reinforcement throughout the course may hinder the acquisition and retention of basic clinical skills; in particular, the locomotor system may not be regarded as a routine part of patient assessment [4].

In 1971 only one school assessed clinical skills in rheumatology and only three (12%) held a written examination. Following this and the 1979 survey, the need to underscore the importance of rheumatology by formal assessment of clinical skills (the examination 'stick') was emphasised [5, 6]. At present, although rheumatology multiple-choice questions form part of the final examination in 78% of medical schools, clinical skills are examined in only 22%, and in only 15% are they considered important enough to count towards the final examination. The fact that the majority of medical schools emphasise and test specific written knowledge which may soon become outdated is also disappointing, since it is widely recommended that the emphasis should be on basic clinical skills and scientific procedure which will provide a firm foundation upon which continuing education can build and adapt [12, 13, 15, 18]. This need is being recognised in the development of a core curriculum in rheumatology by the British Society for Rheumatology and the Arthritis and Rheumatism Council.

Acknowledgements

We wish to thank all those in the medical schools who responded to the survey and for their additional comments and advice.

References

1 *Morbidity statistics from general practice 1981–1982.* Third National Study. Series MB5 No 1. HMSO.
2 Arthritis and Rheumatism Council Field Unit. Digest of data on the rheumatic diseases. 1. Morbidity in industry, and rheumatism in general practice. *Ann Rheum Dis* 1974;**33:**93–105.
3 Spencer MA, Dixon AS. Rheumatological features of patients admitted as emergencies to acute general medical wards. *Rheumatol Rehabil* 1981;**20:**71–3.
4 Doherty M, Abawi J, Pattrick M. Audit of medical inpatient examination: a cry from the joint. *J R Coll Physicians Lond* 1990;**24:**115–8.
5 Wood PHN, Benn RT. Undergraduate training in rheumatology in the United Kingdom. *Br J Med Educ* 1972;**6:**325–32.
6 Wood PHN, Badley EM (eds). *People with arthritis deserve well-trained doctors: report of a workshop organised by the Arthritis and Rheumatism Council.* London: Arthritis and Rheumatism Council, 1979.
7 Wright V, Hopkins R, Burton KE. What shall we teach undergraduates? *Br Med J* 1979;**i:**805–7.
8 Jones AC, Ledingham J, Regan M, Doherty M. A proposed minimal rheumatological screening history and examination: the joint answers back. *J R Coll Physicians Lond* 1991;**25:**111–5.
9 Golding DN. Postgraduate education in rheumatology: who should teach what and to whom? *J R Soc Med* 1982;**75:**985–6.
10 Rudd E, Lockshin MD. ILAR-ARA workshop report: education in rheumatology for the primary care physician. *J Rheumatol* 1978;**5:**99–111.
11 Dawes PT, Shadforth MF, Hothersall TE, McGuinness B. Primary care—the educational need. *Br J Rheumatol* 1990;**29:**401
12 Summerton N. More training in rheumatology? *Gastroenterology and Rheumatology in Practice* 1990 April; **1:**30–4
13 Undergraduate education in rheumatology (editorial). *Br Med J* 1979;**ii:**885–6.
14 Helliwell PS, Wright V. Referrals to rheumatology. *Br Med J* 1991;**302:**304–5.
15 World Health Organisation. *The work of the World Health Organisation 1978–1979. Biennial report of the Director-General.* Geneva: WHO, 1980.
16 Harris R, Johnston A, Harris H, Young I. Teaching genetics to medical students: report of a working party of the clinical genetics committee of the Royal College of Physicians. *J R Coll Physicians Lond* 1990;**24:**80–4.
17 Robine JM, Ritchie K. Healthy life expectancy: evaluation of global indicator of change in population health. *Br Med J* 1991;**302:**457–60.
18 Weatherall DJ. Examining undergraduate examinations. *Lancet* 1991;**338:**37–9.

Address for correspondence: Dr Michael Doherty, Consultant Senior Lecturer, Rheumatology Unit, City Hospital, Nottingham NG5 1PB.