Why do we choose rheumatology? Implications for future recruitment—results of the 2006 UK Trainee Survey

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Introduction

Over recent years, there has been increasing concern amongst rheumatologists in the UK that fewer trainee doctors have been choosing rheumatology as a career [1, 2]. In some regions, training posts have remained unappointed. Restructuring of training under the umbrella of MMC (Modernizing Medical Careers) has the potential to exacerbate this, as junior trainees will be less able to choose posts in specific specialties before committing to higher specialist training programmes [3]. Smaller specialties such as rheumatology could lose out, as interested trainees may no longer have first hand experience at Foundation, ST1 or ST2 level. It is not yet clear to what extent the far-reaching recommendations proposed by the interim report of Professor Sir John Tooke’s independent inquiry into MMC following the collapse of the Medical Training Application Service (MTAS) will be adopted. These recommendations have the potential to restore some flexibility and wider exposure to training if adopted [4].

Since the negotiation of the new GP contract in 2003, recruitment figures to primary care have steadily risen, with juniors citing better work-life balance, greater flexibility over working hours, varied work and more control over working practice as reasons to choose general practice above hospital specialties [5]. More recently, the Government White Paper (Our health, our care, our say) [6] has introduced uncertainty about the future place of hospital-based rheumatology in the provision of musculoskeletal health care. Some departments have been faced with the threat of closure, with the devolution of musculoskeletal services into primary care or new independent sector treatment centres [7].

Against this background, we wished to explore the reasons why current specialist registrars (SpRs) chose rheumatology as a career, and gain their grass roots insights into why junior trainees may no longer be choosing rheumatology. This information will inform the development of strategies for enhancing recruitment into the specialty.

Methods

All rheumatology SpRs on the JCHMT (Joint Committee for Higher Medical Training) database throughout the UK were sent a postal questionnaire between December 2005 and January 2006. In addition all SpRs on the Rheumatologists at Training database of the British Society for Rheumatology were sent the questionnaire by e-mail. A reminder e-mail was sent 2 months later.

The questionnaire design was based on rheumatology SpR surveys performed over previous years, in order to gather data on demographics and training requirements. The response rate and reliability of data collection using these earlier questionnaires was satisfactory. The current questionnaire gathered basic demographic information, information about trainees’ experience in rheumatology prior to SpR appointment, with new questions to explore factors influencing choice of specialty. Trainees were then asked whether they would still choose rheumatology as a specialty, and to comment by free text response on what they thought may be influencing current junior trainees to choose or avoid rheumatology. A pilot was conducted with rheumatology and other medical SpRs in the deanery of one of the authors (L.D.) (see Supplementary Appendix 1, available as Supplementary Data at Rheumatology Online).

Statistics were analysed using SPSS (SPSS inc., Chicago), and free text responses analysed using qualitative theme analysis [8].

Results

Response rate

Seventy-three percent (165/227) of trainees on the JCHMT database responded. This represented 93% (81/87) of those singly accrediting but only 59% (83/140) of those dually accrediting SpRs.
accrediting with general medicine (GIM). This is similar to the experience with previous rheumatology trainee surveys conducted by the authors (unpublished data) and others [9].

Demographics
The demographics of the trainees are shown in Table 1. The male: female ratio of respondents has decreased since previous surveys [9], but the proportion of flexible trainees has remained static. Overall, 58% were females, 88% were training full-time and 49% were singly accrediting.

Prior experience in rheumatology
Most trainees recall undergraduate rheumatology teaching (n = 121, 73.3%). This included a range of educational strategies from a traditional rheumatology attachment (n = 92, 55.8%), to lectures/tutorials (n = 68, 41.2%) and other activities such as electives and student research projects (n = 6, 3.6%). Five trainees had an intercalated degree in a related subject.

Prior to specialist registrar appointment, the vast majority of trainees had experience at SHO level (n = 147, 89.1%). The duration of these posts was an average of 6 months (range 1–18 months) and most (n = 137, 93.8%) involved outpatient clinics. Two-thirds of rheumatology SHO posts were combined with GIM (n = 91/144, 63.2%), with one-third pure rheumatology (n = 53/144, 36.8%). Of the minority who did not have SHO experience (n = 18), 10 recalled rheumatology teaching as students, one experience as a pre-registration house officer, five as Clinical Fellow/LAS/LAT grades and one as an SpR in rehabilitation. Only one trainee cited no prior rheumatology training at all before SpR appointment. Prior experience for all trainees, both those with SHO experience and those without, is shown in Table 2.

Timing of the decision to train in rheumatology
When asked at what stage of their career a firm decision had been made to choose rheumatology as a speciality, the overwhelming majority of trainees cited their SHO post (n = 135, 81.8%). Thereafter, trainees cited clinical fellow posts (n = 10, 6.1%) earlier student experience (n = 7, 4.2%), a LAT/LAS post (n = 5, 3.0%) or pre-registration house officer posts (n = 4, 2.4%). A small number did not confirm their choice of rheumatology until after SpR appointment (n = 4, 2.4%).

Key factors influencing the decision to train in rheumatology
When asked to rank the three most important factors influencing choice of speciality, the top four answers ranked first, second or third were as follows (Table 3); experience as an SHO, love of the subject matter, meeting inspirational consultants and lifestyle. It should be noted that ranking of the top six answers was unchanged whether responses were weighted (to reflect first, second or third choice) or unweighted as shown in Table 3. Although lifestyle factors were rarely ranked as a first or second choice, they were the most frequently cited third ranked answer (in 36% of respondents, Fig. 1).

Free text responses exploring ‘lifestyle aspects’ revealed three key themes: the avoidance of GIM training (n = 25), less out of hours commitment (n = 13) and a perceived flexibility to fit in with current or future family commitments (n = 11). Many respondents emphasized the combination of lifestyle with continued academic engagement.

Importance of training within a particular location
When asked if staying in a particular geographical location was more important than the choice of speciality, the majority of trainees said no (n = 134, 81.2%). Of those for whom geography was more important than speciality, women and flexible trainees were not disproportionately represented (65% women vs 58%...
either further medical specialities or those closely affiliated, such as intensive care. Only four trainees cited specialities that would have required alternative SHO training routes (such as orthopaedics, paediatrics).

**Would respondents still choose rheumatology as a speciality?**

Reassuringly, the vast majority of trainees would still choose rheumatology as a speciality if offered a choice again (n = 147, 89.1%). Dual accrediting trainees were over-represented in those who would not (n = 9 of 13 respondents, 69.2%), while in contrast to alternatives considered prior to training, in those that specified an alternative (n = 7), primary care was the most commonly cited (n = 5).

**Factors perceived to be influencing current junior trainees to choose rheumatology**

Trainees’ perceptions of what may be influencing current foundation trainees to choose or avoid rheumatology are presented in Table 5. Some of the data are necessarily contradictory, reflecting the breadth of opinion. Broadly, there are five influencing themes: rheumatology (the subject), work-life balance (positively influential factors), employment/service delivery issues (a negatively influential factor) and specialty profile and prior exposure (concurrently positive and negative influences). Of 147 free text comments detailing why current trainees may be avoiding rheumatology, 72 (49%) related to the perceived poor profile of the specialty. This compares with 37/271 (14%) comments detailing why trainees may actively choose rheumatology, relating to a favourable specialty profile. Free text responses are presented in Table 6 that illustrate these five themes in more detail.

**Increasing recruitment to rheumatology**

When asked to identify what factors would assist future recruitment to a specialty, five themes were identified in the responses: exposure to the specialty, employment/service delivery, interface with GIM, rheumatology profile and academic careers. These are discussed in detail subsequently.

**Exposure.** Specific points raised with respect to SHO/Foundation posts were to increase the availability of posts, to encourage experience in clinic as well as the ward, to expose juniors to patients treated with ‘cutting edge’ treatments, offer an organized programme of rheumatology-specific audit projects to rotating juniors and to ensure posts were educational rather than providing service alone. Catching trainees while studying for their PACES examination, in particular using inspirational rheumatology role models in teaching, was felt to be important. Many trainees felt we should all be involved in local provision of PACES style teaching. Targeting GP trainees was an additional suggestion.

At undergraduate level, ideas included increasing the number of rheumatology-specific student-selected components provided, promoting basic and advanced (e.g. final year) rheumatology attachments, teaching advances to medical students and providing student prizes. Early student exposure to rheumatology was felt to be vital and some suggested specific targeting of good medical students while they were still undergraduates.

**Employment/service delivery.** Securing rheumatology as a hospital-based speciality and providing security of consultant numbers was cited as crucial. Increasing the availability and accessibility of flexible training was felt to be important. Some felt there was regional variation in the quality of training programmes that could be addressed. Concerns persisted about salary at training level.
TABLE 5. Factors influencing trainees to choose/avoid rheumatology

<table>
<thead>
<tr>
<th>Key themes</th>
<th>Positive influences</th>
<th>Negative influences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rheumatology</strong></td>
<td>New treatments/research advances</td>
<td>Lack of SHO exposure</td>
</tr>
<tr>
<td>Specific</td>
<td>Interesting subject/multi-system challenge/breadth of disease</td>
<td>Poor role models</td>
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<tr>
<td></td>
<td>Academic potential</td>
<td>Poor/non-inspirational teaching</td>
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<td></td>
<td>Development of musculoskeletal imaging</td>
<td>Lack of knowledge about subject</td>
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<td></td>
<td>Strong immunology link</td>
<td>Perceived as easy option</td>
</tr>
<tr>
<td><strong>Generic</strong></td>
<td>Multidisciplinary working</td>
<td>Unglamerous specialty/low profile/boring</td>
</tr>
<tr>
<td></td>
<td>Continuity of care</td>
<td>Misconception that all patients ‘heart sink’</td>
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<tr>
<td></td>
<td>OPD specialty/less acute work</td>
<td>Lack of GIM/OPD based only</td>
</tr>
<tr>
<td><strong>Work/life balance</strong></td>
<td>Lifestyle</td>
<td>Perception that research is necessary</td>
</tr>
<tr>
<td></td>
<td>Opportunity for flexible working</td>
<td>Concern regarding primary/secondary care interface/future position of rheumatology</td>
</tr>
<tr>
<td><strong>Prior exposure</strong></td>
<td>Previous SHO or other experience</td>
<td>GP more lucrative/attractive than hospital medicine</td>
</tr>
<tr>
<td></td>
<td>Inspirational rheumatologist</td>
<td>Concern at blurring of roles between doctors and other health professionals</td>
</tr>
<tr>
<td><strong>Profile</strong></td>
<td>SHOs ‘settling’ for less competitive specialty/availability of NTNs</td>
<td>Not seen as a speciality for flexible training</td>
</tr>
<tr>
<td></td>
<td>Good/raised profile recently</td>
<td>Lack of training and consultant posts</td>
</tr>
<tr>
<td>Employment/service delivery</td>
<td></td>
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</tbody>
</table>

TABLE 6. Qualitative responses to individual questions by themes

**Importance of lifestyle factors**
- ‘Liked GIM but not hours; knew would like to have kids and work p/t [part-time] so rheumatology a good choice’
- ‘Intellectual challenge whilst retaining lifestyle’
- ‘Avoid GIM but remain in a hospital environment’

**Perceived problems with GIM training**
- ‘Fragmentation of care with GIM’
- ‘GIM increasingly a battlefield detrimental to practice of medicine’
- ‘General medicine dominates rheumatology in dual accreditation’
- ‘GP as an alternative to rheumatology’
- ‘GP – flexible working, better pay – GPwSI – autonomy away from NHS managers’

**Concern over the future place of rheumatology as a speciality**
- ‘Uncertain future prospects for speciality’
- ‘Colleagues do not respect rheumatologists’ GIM abilities’
- ‘Speciality becoming isolated in hospitals where rheum very separate from GIM’
- ‘Lack of GIM (in most centres) sidelines rheumatology’

**Factors likely to attract future trainees to rheumatology**
- ‘Good mix of thinking, hands on and communication’
- ‘No GIM but still multi-system disease’

**Poor profile of rheumatology as a specialty**
- ‘Easy option, not a real specialty’
- ‘Moaning patients with disabilities’
- ‘Crumbly patient specialty’
- ‘They think it is all back pain and giving steroids’
- ‘Perceived as backwater specialty’
- ‘Not a dynamic specialty’
- ‘Lack of prominence in hospital and poor status’

**Interface with GIM.** The opinions regarding GIM were contradictory, with equal numbers suggesting increasing vs decreasing links. Many felt losing the tie to GIM would make the speciality more attractive; many others felt that loss of GIM would contribute to speciality marginalization and poor recruitment.

**Raising the profile.** Many felt we should be working hard to ‘sell rheumatology’ as a subject. Suggestions included highlighting the multi-system nature of the disease we treat, changing our title to ‘multi-system disease physician’, emphasizing the potential excitement and rewards involved in treating sick rheumatology patients, and also emphasizing the need for solid general medical knowledge. Promoting the role of rheumatology within medicine and also promotion of ground-breaking advances were felt to be a key. One respondent suggested a rheumatology article in BMJ Careers.

At SHO/Foundation level, it was suggested that rheumatology needed a more noticeable presence at educational meetings and grand rounds. More junior trainees should be targeted for BSR courses and SHO/Foundation-specific study days. Targeting of career days/gateway days should also be considered. Again new therapies/research advances were felt to be crucial components of the curriculum for any such courses.

Finally, it was suggested that we take a more pro-active local position through targeting of individual trainees and active recruitment by both SpRs and consultants. It was also suggested that SpRs talk to SHOs about working in rheumatology, not just teach rheumatology as a subject.

**Academic careers.** Many suggested that academic career pathways be promoted. Increasing research fellow posts was felt to be an option, as well as providing research projects that trainees could slot into. More flexible research options including MSc were felt to be an attractive alternative to the more traditional MD/PhD.

**Discussion**
This survey has explored the critical factors influencing trainees’ choice of rheumatology as a speciality. As with previous surveys, there is a response bias in favour of singly accrediting trainees and we acknowledge that current trainees’ responses may differ from those of prospective trainees. It is also possible that ‘softer’ motivational factors such as lifestyle were ranked below others as respondents felt that this is not a professionally acceptable answer. However, we believe that we have demonstrated some important factors which the speciality can now utilize for future recruitment strategies.
The four critical factors influencing the choice of rheumatology were experience as an SHO, love of the subject matter, meeting inspirational consultants and lifestyle factors. While 36% of trainees listed lifestyle factors as one of the critical factors influencing their choice of rheumatology, it is interesting to note that this was most commonly the third ranked critical factor. This contrasts with the feeling amongst trainees that part of rheumatology’s perceived poor profile reflects the fact that rheumatology may be seen as a ‘soft option’. The consistent nomination of lifestyle as a third placed influence suggests that an intellectually stimulating hospital speciality which does not place the same demands on personal life as GIM-based specialities is highly attractive to potential trainees. On the other hand, it is important to note that the complete loss of on-call programmes and linked income may influence trainees, particularly male respondents in this linked survey, to avoid the speciality in future.

The vast majority of current trainees had rheumatology experience as an SHO, and this was the time that they made their career decision. If as feared with the advent of MMC, exposure to the speciality at early postgraduate level is diminished [3], the consequences for recruitment could be severe. It has already been suggested that as a speciality we maximize locally the number of posts provided within foundation programmes, and that if this is not possible we offer outpatient experience in designated clinics for trainees [1]. This is echoed strongly in the survey responses, and should be the primary target of any activity aimed at recruiting trainees. This also corresponds with findings of the recent Tooke report, published in the wake of the failure of MTAS, which explicitly states that ST1 is too early to decide on a speciality for the majority of doctors. Tooke’s recommendations are that FY2, ST1 and ST2 with their imposed rigidity should be abandoned in favour of more flexible core specialist rotations with generic, transferable elements and some hybrid rotations. This system would be more likely to offer experience of rheumatology to a broader range of trainees [4].

It could be argued that some of the critical factors influencing choice of rheumatology are mutually inclusive; that during SHO experience a love of the subject develops, fostered by the inspirational supervising consultant. Thus, loss of SHO level posts could sound a death knell for speciality recruitment. Extrapolation from other survey answers, however, would suggest that although SHO experience is a key, earlier undergraduate teaching builds the foundation upon which the decision to apply for an SHO post is based. Concern has already been expressed elsewhere that musculoskeletal medicine is poorly represented in the undergraduate curriculum [10]. Interventions in the US to enhance the profile of radiology suggest that increasing early exposure leads to greater awareness and may lead to increased subsequent recruitment [11]. A study in Canada suggested that early positive clinical experiences as medical students were highly influential amongst factors which governed changes of career choice [12]. Our data would therefore support measures to increase the exposure to, quality and structure of rheumatology undergraduate teaching as a means to enhance recruitment.

Strategies to enhance rheumatology recruitment should begin in medical school. The ARC has long donated an annual prize to each medical school, awarded to students excelling in rheumatology. Over the last 12 months, the External Relations Committee at the BSR has also undertaken extensive work in this area. New medical student bursaries have been established which allow prize winners to attend the annual scientific meeting, present their prize winning poster and be mentored at the meeting by SpRs. In addition, a rheumatology trainee profile has recently been published in a well-established medical student careers magazine, Target Medicine [13].

This is not just an issue for the BSR. These data clearly indicate that as individuals we have a powerful sphere of influence on our local trainees. We need to raise our own local profiles. Suggestions to achieve this have emphasized the key role of both undergraduate and postgraduate teaching (especially at PACES level), presentation at Grand Rounds/similar local meetings and the benefit of holding positions such as College Tutor, where one is automatically a point of contact for local trainees.

The national profile of rheumatology is a more complex problem. While a few respondents made positive comments about the image of rheumatology as a speciality, the majority of comments about rheumatology’s profile were damning. If our own trainees think we have a serious image problem, then it is tempting to speculate that the image perceived by juniors who do not become enthused during an SHO job is even worse. If it is true that rheumatology is seen as a speciality lacking in dynamism, a ‘backwater speciality’, then it is time to take action. At a time when those of us within the speciality have seen unprecedented and dynamic advances in treatment, it should not be an insurmountable task to take the message from many survey respondents—and ‘market’ it. Should we seriously entertain a change in speciality title to ‘multi-system disease physician’?

In the US, anxiety over the future of the speciality prompted the commissioning of a survey by the ACR to understand the factors that will affect the future supply of and demand for rheumatologists. While the outlook for the clinical speciality is optimistic based on demographic trends, concern has focused more specifically on the loss of academic rheumatologists to industry, resulting in the potential loss of mentors and inspirational educators for the next generation of rheumatologists [14]. This echoes concerns about the future of clinical academics in the UK.

The relationship between rheumatology and GIM is contradictory. While there is a strong feeling amongst some that integration with GIM is important in maintaining rheumatology’s credibility and position amongst hospital specialities, a substantial number of trainees (60%) chose rheumatology because it did not involve GIM, and because of the lifestyle advantages perceived to be associated with this.

Another point to consider with reference to rheumatology recruitment following recent MMC changes is the influence of geographical location. The data presented here clearly indicate that for the vast majority of trainees (81.2%), choice of speciality is more important than choice of location. This contrasts with data from the 2006 PMETB National Training Survey, where 72% trainees are reported as wishing to remain in their current deanery to complete their training [15]. It is important to note, however, that the PMETB survey did not ask trainees to specify whether they would choose location above speciality, they were simply asked ‘Where do you wish to work after completing your [current] training?’ without any reference to speciality. The relevance of this for smaller specialities such as rheumatology is that once appointed to a run-through training programme after foundation posts, trainees will no longer be able to move deaneries. In smaller deaneries, where there may not be a rheumatology higher specialist training (HST) post available every year, trainees will have to choose another speciality. It is possible that trainees wishing to train in rheumatology will migrate to larger deaneries at core medical training (CMT) level, or within smaller deaneries actively pursue alternative specialities where there is a greater chance of available posts year on year. It is still not clear whether the deaneries should be encouraged to allow cross-deanery applications at HST level for smaller specialities, where posts are not available every year [16]. It is to be hoped that wide ranging changes to deaneries proposed by the Tooke report, which cited a lack of encouragement for career flexibility and unequal access to specialist expertise across the country, will result in improved opportunities for trainees [4].

Due to the small size of rheumatology as a speciality, another area where we may be perceived to be less attractive is in provision of ‘less than full time’ (LTFT) or flexible training. Flexible training has changed. Supernumerary posts are no longer available. The only way to train flexibly is to slot share, job share or for permanent LTFT positions to be created locally. Slot
and job shares require more than one LTFT trainee within a region, usually at a similar stage in training, for the posts to work. Most of our rheumatology training regions are simply not large enough to accommodate this. Across the board, women trainees are shunning hospital specialities in favour of general practice due to concern about availability of LTFT training [5]. With 60% of rheumatology trainees being female, who may wish to complete their training flexibly (even if working full time initially as trainees), we should be pro-active as a specialty to ensure that this does not negatively influence future recruitment. Furthermore, our data suggest that the current trend towards loss of rheumatology on call and its associated income may discourage male applicants to the specialty, leading to a greater proportion of female trainees.

The availability of posts in research was identified as an influential factor in choosing rheumatology for a third of current trainees, with a majority of trainees continuing to undertake and actively plan dedicated research time. It is therefore vital that research opportunities are provided for rheumatology trainees. In particular, those outside the limited number of formal academic specialty training posts should have the opportunity, as proposed within the Walport report [17], to access research posts. Otherwise, we risk disenfranchising a major group of potential trainees who perceive rheumatology as an intellectually rewarding, research-based specialty. Interestingly, the Tooke report criticized the current binary split emerging between clinical and academic pathways, and recommended a more flexible approach to academic careers [4].

Our survey has shown that one of the major factors thought to be negatively influencing trainees’ choice of rheumatology is the concern regarding its uncertain future position between primary and secondary care. Undeniably, this will influence trainee numbers. Whilst we continue to address this potential shift nationally [7], it is a politically driven move and follows clear government intent to deliver health care nearer to patients’ homes and work places [6]. As such, it may be the factor over which we have least autonomous control. The Tooke report is ambivalent on this issue, tacitly acknowledging an inevitable move towards a region, usually at a similar stage in training, for the posts to work. Most of our rheumatology training regions are simply not large enough to accommodate this. Across the board, women trainees are shunning hospital specialities in favour of general practice due to concern about availability of LTFT training [5]. With 60% of rheumatology trainees being female, who may wish to complete their training flexibly (even if working full time initially as trainees), we should be pro-active as a specialty to ensure that this does not negatively influence future recruitment. Furthermore, our data suggest that the current trend towards loss of rheumatology on call and its associated income may discourage male applicants to the specialty, leading to a greater proportion of female trainees.

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In summary, this survey has demonstrated many positive areas with regard to rheumatology recruitment. Nine out of 10 rheumatology SpRs would still choose rheumatology as a specialty today, and the four most influential factors over choice of specialty were universally positive—experience as an SHO, love of the subject, inspirational consultants and lifestyle. Trainees choose their specialty at SHO (or equivalent) level and the vast majority make this decision within a rheumatology post. Given the suggestion from this study that rheumatology has a poorly strong representation within medicine posts following MMC restructuring. This study suggests that one of our greatest assets is the four most influential factors over choice of location for the convenience of the recruitment system. BMA News 2007;10.


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Supplementary data
Supplementary data are available at Rheumatology Online.

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