An update on UK rheumatology consultant workforce provision: the BSR/ARC Workforce Register 2005–07: assessing the impact of recent changes in NHS provision

M. J. Harrison¹, C. Deighton² and D. P. M. Symmons¹

Objectives. To describe changes in the provision of rheumatology services, monitor the pattern of inequalities in UK rheumatology service provision since 2005, and to summarize the 3-yr impact of the new National Health Service (NHS) consultant contract and the Musculoskeletal Services Framework in England and Wales.

Methods. Questionnaires about timetable and working conditions were sent to all consultants on the BSR/ARC UK Workforce Register in January 2007, along with the personal and job-related details currently held about them on the register to update. The questionnaire included a visual analogue scale asking ‘how concerned are you that your current post might be under threat’ ranging from 0 ‘Not at all’ to 100 ‘Extremely’.

Results. The response rate of the 2005 and 2007 surveys were 89 and 87%, respectively. Levels of optimal provision now exceed 70% in England and Wales, and 50% in Scotland and Northern Ireland. Levels of provision remain substantially higher in London than anywhere else. The median level of perceived job threat in the UK was 31 (interquartile range 11–61). Consultants in areas where provision is highest and a higher proportion of services are run in conjunction with Clinical Assessment and Treatment (CAT) centres report higher perceived job threat.

Conclusions. Provision of rheumatology services has continued to expand over the past decade; however, inequalities persist at national and sub-national level. There is evidence of improvement in regions with the lowest provision, but there are indications of increased perceived job threat in areas with both rheumatology and where CAT centres have been introduced.

Key words: Rheumatology workforce, Healthcare delivery, Service provision.

Background

The United Kingdom Consultant Rheumatology Workforce Register was established in 1971 to record details of all National Health Service (NHS) consultant rheumatologists. The register has been held on behalf of the British Society for Rheumatology (BSR) and Arthritis Research Campaign (ARC) at the ARC Epidemiology Unit since 1983. The register is updated biennially, with the most recent review being completed in 2007.

The objective of the register is to monitor and summarize changes in the provision of rheumatology services nationwide. A key area of continuing interest has been the inequality in numbers of whole-time equivalent (WTE) consultant rheumatologists at both national and regional level. Provision is assessed against benchmark levels of provision, most recently the BSR needs-based estimate of rheumatology healthcare requirements, which recommended that optimal provision would be one WTE consultant rheumatologist per 90,000 population [1]. This figure assumes that rheumatologists provide a service for both inflammatory and non-inflammatory musculoskeletal conditions; and that consultant rheumatologists have the support of specialist rheumatology nurses. A series of publications [2–5] has summarized changes using information from the BSR/ARC Rheumatology Workforce Register, most recently based on the 2005 update [5].

Working practice in rheumatology is currently in a state of transformation, having been affected by the new consultant contract introduced in 2004 [6, 7] and, more recently, the Musculoskeletal Services Framework (MSF) affecting England and Wales and published since the last workforce update [8]. At the time of the last review the new consultant contract was in place for most consultants and appeared to lead to a median increase of 6 h/week that consultant rheumatologists worked [5]. It was unclear whether this increase in reported hours worked reflected a genuine increase or better recognition of existing working patterns. The latest review provides a good opportunity to assess the impact of the new contract over an extended period.

The main emphasis of the MSF is to improve access to services by an actively managed patient pathway that includes moving services closer to the patients, and reducing the time from presentation to the general practitioner (GP) to receiving hospital treatment [8]. In some areas, Clinical Assessment and Treatment Services (CATS) have been established as a mechanism to ‘triage’ patients at the interface between primary and secondary care. They aim to ensure more efficient patient pathways appropriate for patient needs. CATS may be comprised of a variety of health professionals including consultants, GPs with special interests (GPwSI), clinical nurse specialists and a range of allied health professionals. In theory, CATS should allow quicker assessment, investigation and advice and onward referral where necessary [8]. The call for services to be provided closer to the patient’s home may lead to more rheumatology services being provided in primary care possibly by GPwSIs or clinical nurse or physiotherapy specialists [8].

Improvements in the care pathway are supported by the use of Independent Sector Treatment Centres (ISTC) where gaps in provision, such as musculoskeletal procedures, are identified. ISTCs may provide up to 15% of surgical procedures and an ‘increasing number’ of diagnostic procedures [9]. The MSF targets an 18-week pathway between GP referral and hospital treatment by December 2008 [8]. Reduction of waiting times may lead to a permanent increase in the use of ISTCs [9]. To be on target for the 18-week pathway, the waiting time for an outpatient...
appointment from GP referral would be 11 weeks at the time of the 2007 update.

The aim of this article is to describe changes in the provision of rheumatology services in response to the MSF in England and Wales and continue to monitor the pattern of inequalities in rheumatology service provision since 2005, and to summarize the 3-yr impact of the new NHS consultant contract.

### Methods

In January 2005 and 2007, each consultant on the BSR/ARC Rheumatology Workforce Register database was sent a copy of the personal and job-related details currently held about them on the register to update, and a questionnaire asking about their timetable and working conditions. The data held include demographic details, training and qualifications, type of contract, hospitals at which each consultant works and their colleagues at each hospital. The questionnaire sought further detail about working practices, conditions and responsibilities and service structure, and also asked for details of any new consultants appointed since the last survey. The 2007 questionnaire contained a visual analogue scale asking ‘how concerned are you that your current post might be under threat’ which ranged from 0 ‘Not at all’ to 100 ‘Extremely’. A first reminder was sent to non-responding consultants after ~6 weeks, followed by up to two subsequent reminders after 6 weeks of non-response thereafter. Finally, a personalized reminder letter was sent ~6 months after the initial mailing.

As in the previous update, levels of provision at national and regional levels were compared against the benchmark of one WTE rheumatologist per 90 000 population [10]. Each consultant contracted for 10 programmed activities (PAs) or more in rheumatology was counted as one WTE. Those working fewer than 10 PAs, had a WTE number calculated by dividing the number of contracted PAs by 10. Consultants combining rheumatology with another speciality only counted as contributing their pure rheumatology sessions. Where consultants did not indicate their sub-specialty (e.g. pure rheumatology/combined with acute medicine), they were allocated a sub-specialty commitment in line with the underlying proportion for their country. Where information on the attribution of sessions or PAs was missing, we assumed that consultants combined rheumatology with another speciality contributed five rheumatology PAs per week.

Population estimates for the UK and its constituent countries were based on the Office for National Statistics population estimates for 2005 based on the 2001 census [11] for the 2005 survey and the projected population figures for 2006 (the nearest available projection) for the 2007 survey. The per capita provision for NHS Executive Regions within England was calculated using denominator populations taken from the Department of Health website [12]. The eight NHS Executive Regions used in the reviews of 1997–2005 were phased out and replaced with four English Directorates of Health and Social Care (London, Midlands & Eastern, North and South) [13]. Thus, the latest available population statistics for the NHS Executive Regions were estimates for mid-2000 calculated in April 1999 [12].

### Results

The response rate of the 2005 and 2007 surveys were 89 and 87%, respectively. There has been a progressive decline in response rates since 2003 (Table 1). Seventy-five per cent of the responders returned both the personal details form and the questionnaire.

Ninety-five per cent of the UK consultants responding to the questionnaire had accepted the new consultant contract by January 2007. The proportion of female consultants has increased steadily from 20% in 1997 to 25% in 2007. Similarly, the proportion of consultants contracted for pure rheumatology continued to increase and now exceeds three-quarters of all the rheumatologists (Table 2). Seventeen per cent of consultants now combine rheumatology with acute medicine, and 5% combine rheumatology with another speciality. In Scotland and Northern Ireland, 40–43% of consultants also do acute medicine, whereas in England and Wales 80 and 91%, respectively do pure rheumatology.

The numbers of consultants increased for all countries of the UK and all regions of England apart from the North West and South East (Table 3). Overall consultant numbers for the UK increased by 6% between 2005 and 2007 and the number of WTE consultants increased by 9%. This increased level of provision led to a 5% increase in the percentage of optimal provision levels in the UK. The greatest increase in WTE provision between 2005 and 2007 was seen in Northern Ireland. Levels of WTE optimal provision now exceed 70% in England and Wales. Although provision now exceeds 50% in Scotland and Northern Ireland, a clear North–South inequality in provision still exists in the UK. At the regional level, there was a trend of greater increases in WTE provision between 2005 and 2007 in the areas which had the poorest provision in 2005, with the exception of the West Midlands (Table 3). The largest increases were in the Eastern region, Scotland, Northern Ireland and the South West. This improvement has brought parity in provision for the Eastern (which has traditionally had the lowest level of provision) and South West regions of England. Levels of provision in London continue to exceed the levels of provision throughout the remainder of the UK. However, it is possible that London provides some specialist care for residents in the South East (which now has the worst level of provision in England). If combined, provision for London and South East would be one WTE consultant per 115 114 population, or 78% of optimal provision. This level of provision would be ranked second in the UK.

The average full-time consultant in 2007 reported a median of 41 h week (IQR 37–45), almost the same as reported in 2005 (Table 4). The median number of PAs contracted was 11 (IQR 10–11), and overall ratio of direct clinical care to supporting activities was 3.1:1. These figures are similar to those reported after the introduction of the new contract in 2005. There was no difference in the distribution and number of PAs between consultants in pure rheumatology and those in rheumatology plus acute medicine. The median number of referrals per week was 14 (IQR 10–20) ranging from 12 (IQR 10–15) in Scotland to 14 (IQR 10–20) in England. The median waiting time for a routine outpatient

### Table 1. Response rates

| Year | 1997 | 2001 | 2003 | 2005 | 2007 |
|------|------|------|------|------|------|
| Number of consultants mailed | 412  | 480  | 506  | 542  | 584  |
| Males (%) | 80%  | 78%  | 78%  | 76%  | 75%  |
| Females (%) | 20%  | 22%  | 24%  | 25%  | 25%  |
| Total response rate, n (%) | 350 (85) | 443 (92) | 474 (94) | 482 (89) | 510 (87) |
| Number of questionnaires completed, n (%) | 297 (72% | 407 (85) | 437 (86) | 463 (85) | 437 (75) |

### Table 2. Distribution of specialties for the UK and its constituent countries, n (%)

| Specialty | Pure rheumatology n (%) | Rheumatology and acute medicine n (%) | Rheumatology and other n (%) |
|-----------|--------------------------|--------------------------------------|-----------------------------|
| UK        | 419 (77)                 | 89 (17)                              | 27 (5)                      |
| England   | 367 (80)                 | 67 (15)                              | 24 (5)                      |
| Scotland  | 23 (58)                  | 16 (40)                              | 1 (3)                       |
| Wales     | 21 (91)                  | 0 (0)                                | 2 (9)                       |
| Northern Ireland | 8 (57) | 6 (43) | 0 (0) |
Table 3. Number of WTEs and population per WTE

| NHSE region          | Number of consultants | Population per consultant | Number of WTEs | Population per WTE | Percentage of optimal provision |
|----------------------|-----------------------|---------------------------|---------------|-------------------|-------------------------------|
|                      | 2005                  | 2007                      | 2005          | 2007              | 2005                         |
| Northern and Yorkshirea | 57                   | 60                        | 111 281       | 105 717           | 46                           |
| Trenta               | 41                   | 43                        | 125 805       | 119 953           | 34                           |
| West Midlandsa       | 48                   | 55                        | 111 146       | 97 000            | 42                           |
| North Westa          | 67                   | 67                        | 98 657        | 98 657            | 52                           |
| Easterna             | 39                   | 48                        | 140 000       | 113 750           | 33                           |
| Londona              | 112                  | 115                       | 65 848        | 64 130            | 80                           |
| South Easta          | 76                   | 76                        | 115 013       | 115 013           | 58                           |
| South and Westa      | 39                   | 43                        | 127 564       | 115 698           | 32                           |
| Englandb             | 479                  | 507                       | 105 286       | 100 027           | 377                          |
| Scotlandb            | 40                   | 45                        | 127 375       | 113 511           | 25                           |
| Walesb               | 26                   | 28                        | 113 808       | 106 321           | 21                           |
| Northern Irelandb    | 14                   | 15                        | 123 143       | 115 533           | 9                            |
| UKb                  | 559                  | 595                       | 107 708       | 101 736           | 432                          |

A: Based on resident population estimates calculated in 1999 for mid-year 2000, by age, persons and Department of Health Regional Office areas [12]. B: Based on 2005 and 2006 populations taken from health statistics quarterly, 2007 [11].

Table 4. Breakdown of timetabled weekly commitments in hours, median (IQR)

|                      | n | Direct | Supporting | Ratio of PAs: DCC : SPA | n | Direct | Supporting | Ratio of PAs: DCC : SPA |
|----------------------|---|--------|------------|-------------------------|---|--------|------------|-------------------------|
|                      | 2005 |       |            |                         | 2007 |       |            |                         |
| Total                | 324 | 28.5 (22–34) | 9 (6–13.5) | 3.1 : 1                 | 357 | 29 (21–33) | 9 (6–12) | 3.1 : 1                 |
| By contract          |     |        |            |                         |     |        |            |                         |
| Full timea           | 243 | 31 (25–35) | 10 (6–14)  | 3.2 : 1                 | 259 | 31 (26–35) | 10 (6–13) | 3.1 : 1                 |
| Part timea           | 53  | 21 (18–26) | 8 (5–12)   | 2.6 : 1                 | 60  | 21 (16.5–25) | 6 (3–9) | 3.7 : 1                 |
| By specialty         |     |        |            |                         |     |        |            |                         |
| Pure rheumatology    | 229 | 28 (22–34) | 9 (6–13)   | 3.2 : 1                 | 260 | 28 (21–33) | 9 (5.5–12) | 3 : 1                   |
| Rheumatology and GIM | 60  | 30 (23–35) | 9.5 (5–13) | 3.2 : 1                 | 57  | 31 (25–35) | 9 (6–13)  | 3.8 : 1                 |
| Rheumatology and other | 25 | 28 (35–35) | 10 (8–15)  | 2.7 : 1                 | 15  | 30.5 (27–34) | 9.5 (4.5–16) | 2.9 : 1                |
| By country           |     |        |            |                         |     |        |            |                         |
| England              | 273 | 28 (22–34) | 10 (6–14)  | 3 : 1                   | 308 | 28 (21–33) | 9 (6–13)  | 3 : 1                   |
| Scotland             | 24  | 28.5 (22–35) | 8 (4–10.5) | 3.5 : 1                 | 25  | 31 (23–33) | 9 (6–12)  | 3.1 : 1                 |
| Wales                | 18  | 31.5 (29–33) | 10.5 (8–13) | 3.1 : 1                 | 14  | 27 (21–29)  | 7.5 (5–12) | 3.5 : 1                |
| Northern Ireland     | 8   | 33 (26.5–40) | 7 (4.5–8.5) | 4.4 : 1                 | 10  | 31.5 (29–34) | 7 (5–11) | 4.4 : 1                |

A: Maximum part-time consultants regarded as full-time for the analysis in 2005. GIM: General Internal Medicine (Acute Medicine); DCC: direct clinical care; SPA: supporting professional activities; PA: programmed activities.

Table 5. Service delivery reflecting the MSF by constituent country of the UK

|                      | n | UK | England | Scotland | Wales | Northern Ireland |
|----------------------|---|----|---------|----------|-------|------------------|
| Service run in conjunction with local CAT centre, n (%) | 387 | 49 (13) | 47 (14) | 0 (0) | 2 (14) | 0 (0) |
| Consultants working in a CAT centre, n (%) | 386 | 11 (3) | 9 (3) | 0 (0) | 2 (14) | 0 (0) |
| Service run in conjunction with an ISTC, n (%) | 379 | 15 (4) | 15 (5) | 0 (0) | 0 (0) | 0 (0) |
| Consultants working in an ISTC, n (%) | 380 | 3 (1) | 3 (1) | 0 (0) | 0 (0) | 0 (0) |
| Asked to move sessions into primary care, n (%) | 405 | 36 (9) | 36 (10) | 0 (0) | 0 (0) | 0 (0) |
| Able to make consultant to consultant referrals, n (%) | 411 | 310 (75) | 256 (72) | 32 (100) | 14 (93) | 8 (100) |
| Consultant has a clinical nurse specialist, n (%) | 413 | 404 (96) | 347 (97) | 32 (100) | 15 (100) | 10 (100) |
| Number of clinical nurse specialists, n (N : C ratio)a | 413 | 514 (1.25 : 1) | 439 (1.23 : 1) | 43 (1.34 : 1) | 25 (1.67 : 1) | 7 (0.71 : 1) |
| Consultant works with a GPwSI, n (%) | 409 | 88 (22) | 78 (22) | 3 (9) | 5 (33) | 2 (20) |
| Number of GPwSI, n (GP : C ratio)a | 409 | 105 (0.26 : 1) | 91 (0.26 : 1) | 2 (0.06 : 1) | 10 (0.67 : 1) | 2 (0.2 : 1) |
| New outpatient appointment wait (weeks)b | 395 | 10 (6–12) | 9 (6–12) | 19 (13–26) | 13 (14–32) | 24 (20–26) |

A: for consultants replying; b: median (IQR). N : C: nurse to consultant ratio; GP : C: GP to consultant ratio.

appointment in the UK was 10 weeks (IQR 6–12), ranging from 9 weeks in England to 24 weeks in Wales and Northern Ireland.

Fourteen per cent of consultants in England and Wales now deliver their service in conjunction with a CAT (Table 5). One in five of the consultants in England (n = 47) and both of the consultants in Wales reported working in conjunction with a CAT actually worked in the CAT centre. Fifteen (4%) consultants in England ran their service in conjunction with an ISTC, but only three actually worked in an ISTC. Thirty-six consultants, all in England had been asked to move their rheumatology sessions into primary care. Ninety-eight percent of consultants in the UK reported having a clinical nurse specialist, including all consultants in Scotland, Wales and Northern Ireland, although only 356 (81%) of the consultants answered this question. The median number of clinical nurse specialists per consultant was 2 for the UK (IQR 1–3), and this was consistent across all countries apart from Northern Ireland where each consultant reported one. However, it is difficult to tell if there is double counting—with the same nurse working with more than one consultant. One in five consultants in the UK works with a GPwSI—this ranged from 9% in Scotland to 33% in Wales. The 409 consultants providing information on GPwSI reported 105 such GPs in the UK, ~1 to every 4 consultants. Typically, these GPs only worked with one consultant, although a minority in England worked with up to three.

Most consultants in the UK did not perceive their job to be under threat. The median visual analogue score was 31 (IQR 11–61) (Table 6). However, there was a wide range in perceived
Consultants working in an ISTC, asked to move sessions into primary care, number of clinical nurse specialists, service run in conjunction with local CAT centre, service run in conjunction with an ISTC.

There have been sustained but gradual improvements in consultant rheumatology provision throughout the past decade. The population served per WTE in the UK is now 128,793 compared with 191,913, 10 yrs ago [4]. The largest increase in WTE between 2005 and 2007 was seen in Scotland (9%) and Northern Ireland (10%). Scotland still has the lowest level of provision of the four countries. Since our calculation of WTE is based on pure rheumatology (and excludes the acute medicine component), the increase in numbers of consultants in Scotland did not result in the same level of improvement in WTE provision. Provision in England and Wales is now approaching 75% of optimum provision, whilst Scotland and Northern Ireland operate at a little over 50%.

Our WTE estimates for regions within England are based on population estimates for 2001 [12]. Population estimates from the Government Actuary’s Department [14] suggest that the UK population increased by 1.31% between 2001 and 2005 and 1.99% for 2005 and 2007, respectively, and that the change in levels of provision represents an over-estimation of ~0.5%.

Expansion has been most marked in regions which previously had the lowest provision, helping to reduce inequality. However, consultants in areas of higher provision are aware that the risk of redundancy is possible if an excess of supply of service is perceived to be there. However, the waiting times for routine outpatient appointments do not support this premise. Median waiting times in the North West are the same as in the West Midlands, and those in London and the South East are comparable with those in the Eastern region. There are also indications of increased perceived job threat in areas with traditionally higher provision and where CAT centres have been introduced. The finding of higher perceived job threat was also apparent at the national level, with consultants from England perceiving the highest level of threat but those in Scotland with the lowest.

Timely data on levels of rheumatology provision in other countries is difficult to obtain and interpret due to differences in the structure of provision and remit of physicians with each country. We obtained data for provision in the USA [15], The Netherlands (Nederlandse Vereniging voor Reumatologie, 2007, Dr Frank Jelles, personal communication), Germany [16] and New Zealand [17], which suggest that the UK has consultant per capita (based on population estimates from a single source [18]) numbers in excess of those in New Zealand (WTE) and Germany, but below those of The Netherlands and the USA (Fig. 1). Data from Ontario from 2000 suggest that Canada has a level of provision of 1.35/100,000 population, in excess of those in the UK [19]. Patterns of inequality in provision are also common in other countries, with the greatest provision evident in major cities [16]. In Ontario, Toronto has highest level of half-day expansion.

Discussion

There have been sustained but gradual improvements in consultant rheumatology provision throughout the past decade. The population served per WTE in the UK is now 128,793 compared with 191,913, 10 yrs ago [4]. The largest increase in WTE between 2005 and 2007 was seen in Scotland (9%) and Northern Ireland (10%). Scotland still has the lowest level of provision of the four countries. Since our calculation of WTE is based on pure rheumatology (and excludes the acute medicine component), the increase in numbers of consultants in Scotland did not result in the same level of improvement in WTE provision. Provision in England and Wales is now approaching 75% of optimum provision, whilst Scotland and Northern Ireland operate at a little over 50%.

Our WTE estimates for regions within England are based on population estimates for 2001 [12]. Population estimates from the Government Actuary’s Department [14] suggest that the UK population increased by 1.31% between 2001 and 2005 and 1.99% from 2005 to 2007. Applying these changes to our WTE estimates suggests that our figures represent 1 and 1.5% over-estimation.

**Table 6. Concern that the current job is under threat (0, not at all: 100, extremely)**

|         | n   | Median (IQR) | Range |
|---------|-----|--------------|-------|
| UK      | 413 | 31 (11–61)   | 0–100 |
| Scotland| 32  | 7 (1–13)     | 0–79  |
| Wales   | 14  | 7.5 (2–34)   | 1–70  |
| Northern Ireland | 10 | 18.8 (1–49) | 0–85  |
| England | 357 | 35 (15–64)   | 0–100 |
| Northern and Yorkshire | 47 | 27 (16–53) | 0–100 |
| Trent   | 30  | 31.5 (15–53) | 0–88  |
| West Midlands | 38 | 22.5 (3–48) | 0–80  |
| North West | 54 | 45.5 (18–68) | 0–99  |
| Eastern | 31  | 37 (7–68)    | 0–85  |
| London and South East | 130 | 50 (21–67) | 1–99  |
| South and West | 27 | 32 (16–68) | 0–96  |

**Table 7. Service delivery reflecting the MSF by regional office of England**

|                  | n² | Northern and Yorkshire | Trent | West Midlands | North West | Eastern | London and South East | South West |
|------------------|----|------------------------|-------|--------------|------------|--------|-----------------------|-----------|
| Service run in conjunction with local CAT centre, n (%) | 343 | 3 (6)                  | 1 (3) | 2 (6)        | 11 (21)    | 7 (22) | 21 (17)               | 2 (8)     |
| Consultants working in a CAT centre, n (%)             | 342 | 1 (2)                  | 0 (0) | 0 (0)        | 2 (4)      | 1 (3)  | 4 (3)                 | 1 (4)     |
| Service run in conjunction with an ISTC, n (%)         | 336 | 45 (0)                 | 1 (3) | 3 (8)        | 0 (0)      | 1 (3)  | 10 (9)                | 0 (0)     |
| Consultants working in an ISTC, n (%)                 | 337 | 0 (0)                  | 0 (0) | 1 (3)        | 0 (0)      | 0 (0)  | 2 (2)                 | 0 (0)     |
| Asked to move sessions into primary care, n (%)        | 352 | 3 (7)                  | 0 (0) | 8 (21)       | 4 (7)      | 3 (9)  | 16 (13)               | 2 (7)     |
| Able to make consultant to consultant referrals, n (%) | 356 | 41 (87)                | 30 (97) | 28 (74)   | 49 (91)    | 18 (55) | 60 (48)               | 24 (89)   |
| Consultant has a clinical nurse specialist, n (%)      | 356 | 48 (100)               | 29 (100) | 39 (100) | 52 (100)   | 33 (100) | 123 (95)              | 23 (88)   |
| Number of clinical nurse specialists, n (N: C ratio)²  | 356 | 59 (12:1)              | 35 (12:1) | 67 (12:1) | 73 (10:1)  | 76 (10:1) | 132 (10:1)            | 132 (10:1) |
| Consultant works with a GPwSI, n (%)                  | 351 | 14 (29)                | 8 (28)  | 8 (21)      | 8 (16)     | 8 (24)  | 28 (22)               | 4 (16)    |
| Number of GPwSI, n (GP : C ratio)²                     | 351 | 16 (0.33:1)            | 11 (0.38:1) | 9 (0.21:1) | 6 (0.12:1) | 8 (0.24:1) | 31 (0.24:1)          | 10 (0.40:1) |
| New outpatient appointment wait (weeks)²               | 342 | 10 (6–12)              | 6 (4–10) | 8 (6–11)    | 8 (6–12)   | 12 (9–12) | 10 (7–12)             | 10 (6–12) |

¹For England; ²for consultants replying; ³median (IQR).
international rheumatology provision figures. We are grateful to Prof. Elizabeth Badley for their kind assistance in providing the rheumatology consultants in the UK, who have completed the biennial questionnaires mailed to them by the Workforce Register staff.

**Funding:** The ARC/BSR Rheumatology Workforce Register is supported by a 5-yr programme grant from the ARC and a special purpose grant from the BSR.

**Disclosure statement:** C.D. is the chairman of the BSR Clinical Affairs committee. All other authors have declared no conflicts of interest.

**References**

1. Royal College of Physicians. Consultant physicians working with patients. London, UK, 2005.
2. Symmons DP, Jones S, Hothersall TE. Rheumatology manpower in the 1990s. Br J Rheumatol 1991;30:119–22.
3. Symmons DP, Bankhead CR, Griffiths I, Shipley M. Changing patterns of rheumatology manpower and practice in the UK in the 1990s. Br J Rheumatol 1996;35:483–8.
4. Turner G, Symmons D, Banjii A, Palfertman T. Consultant rheumatology workforce in the UK: changing patterns of provision 1997–2001. Rheumatology 2002;41:680–4.
5. Harrison MJ, Morley KD, Symmons DP. Developments in rheumatology consultant manpower provision: the BSR/arc Workforce Register 2003–05. Rheumatology 2006;45:1416–21.
6. Department of Health. Consultant contract implementation: results of Department of Health National Survey, 2005. http://www.dh.gov.uk/assetRoot/04/10/48/83/04104883.pdf (7 January 2008, date last accessed).
7. National Health Service Modernisation Agency. Consultant contract implementation workbook, 2005. http://www.wise.nhs.uk/cjpt/docs/reference/CC_Workbook_CD/workbook.html (4 January 2008, date last accessed).
8. Department of Health. The musculoskeletal services framework - a joint responsibility: doing it differently. Leeds: Department of Health, 2006.
9. Anon. ISTC Manual. Commercial Directorate of the Department of Health, 2005.
10. Royal College of Physicians. Consultant physicians working with patients. London, UK, 2004.
11. Office for National Statistics. Health statistics quarterly, London, UK, 2007:35:43.
12. Department of Health. The musculoskeletal services framework - a joint responsibility: doing it differently. Leeds: Department of Health, 2006.
13. Office for National Statistics. 2005. United Kingdom: health geography, 1 April 2002 to 31 March 2003. http://www.statistics.gov.uk/geography/downloads/ukhealthgeog2002.pdf (4 January 2006, date last accessed).
14. Government Actuary Department. Population projections, 2007. http://www.gad.gov.uk/Demography%5FData/ (5 September 2007, date last accessed).
15. Deal CL, Hooker R, Harrington T et al. The United States rheumatology workforce: supply and demand, 2005–2025. Arthritis Rheum 2007;56:722–9.
16. Kassenärztlichen Bundesvereinigung. Arztregister, 31 December 2006.
17. Harrison A. Provision of rheumatology services in New Zealand. J NZ Med Assoc 2004;117:846.
18. Population Reference Bureau 2007. World population data sheet 2007. http://www.prb.org/pdf07/07WPDS_Eng.pdf (6 December 2007, date last accessed).
19. Shipton D, Badley EM. Arthritis and related conditions in Ontario. Toronto: Institute for Clinical Evaluative Sciences, 2004:41–62.
20. Canizares M, Badley EM, Davis AE et al. Orthopaedic surgery in Ontario in the era of the wait time strategy. 2007–02. Toronto, Ontario, Canada: Arthritis Community Research & Evaluation Unit (ACREU), 2007.

**Rheumatology key messages**

- Rheumatology service provision has improved consistently in the decade up to 2007 but remains inadequate.
- The inequality of provision between England and Wales and Scotland and Northern Ireland persists.

**Acknowledgements**

We thank Prof. Angela Zink, Prof. Piet van Riel, Dr Frank Jelles and Prof. Elizabeth Badley for their kind assistance in providing international rheumatology provision figures. We are grateful to the waiting times for new routine outpatient appointments in England at the time of the 2007 update were lower than the scheduled target of 11 weeks to meet the target pathway time described by the MSF. However, in Wales and the rest of the UK, (although not covered by the framework) the referral times are almost twice as long as those in England.

In conclusion, provision of rheumatology services has continued to improve over the last decade; however, inequalities persist both at national and sub-national level. There is evidence of improvement in the regions with lowest provision. The new working contract apparently led to an increase in consultant working hours following its introduction in 2004 and this was sustained at this review. The 2007 review followed the introduction of the new MSF and provides an early benchmark for changes and developments in the provision of rheumatology services, which should be evident by the end of December 2008 that immediately precedes the next scheduled review of the BSR/ARC Workforce Register.

*An update on UK rheumatology consultant workforce provision* 1069

**Disclosure statement:** C.D. is the chairman of the BSR Clinical Affairs committee. All other authors have declared no conflicts of interest.