Rheumatology at the general practitioner/hospital interface: a study of prevalence and access to specialist care

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Abstract

Four general practices with a combined population of 23 300 in the west of Scotland participated in a record research and questionnaire assessment of 551 patients with rheumatic diseases. The study describes the prevalence, levels of disability found, and the types of service used. Even with this number of patients it was not possible to detect any significant differences in disability levels, use of second line drugs, or aids/appliances when comparing practices with adequate or inadequate access to rheumatological facilities (general practitioner perception). General practice is an appropriate setting in which to investigate the effect of service provision, but larger studies will be needed to reach more definite conclusions.

Attendance at a specialist rheumatology clinic brings patients with rheumatic disorders into contact with doctors who have special skills and knowledge of the problems that such patients experience. The provision of rheumatic services is very variable in the United Kingdom, and a recent survey has shown that 32 health districts still have no specialist rheumatologists.¹ In many areas access to clinics is difficult, with the burden of care falling largely on general practitioners. Indeed only 10% of patients with rheumatic disorders are referred to hospital clinics in any year.² Referrals by general practitioners to hospital outpatient departments vary by a factor of 25.³ Many factors influence this, including the prevalence of disease, patients' and doctors' perception of costs⁴ and benefits,⁵ but the number of referrals might also be influenced by access to specialist care, including the type of specialist care (orthopaedic/rheumatological) available. A record search in four general practices in the west of Scotland was conducted to provide estimates of the prevalence of 'active' rheumatic diseases. The effect of access to specialist services upon referral patterns and the type of care provided is also discussed.

Patients and methods

Four practices in different social and geographical settings in the west of Scotland participated in a record search and questionnaire assessment. In two practices (A and D) an age-sex register had been compiled immediately before the case note search began,⁶ and in the other two a computerised age-sex register updated on a weekly basis was used to establish the

sampling frame.⁷ Patients' records were searched by a research assistant using operational definitions of rheumatoid arthritis, osteoarthritis, and gout⁸; where other rheumatic disorders were mentioned this was noted. Where the general practitioner's notes (including diagnostic tests, or treatments used in rheumatic diseases) or a consultant's letter, or both, contained a diagnostic term this was designated a 'case'. Where there was any uncertainty one of the general practitioners in the practice reviewed the notes to make a definite decision on a single specific classification. Further details of clinical features and therapeutic data were sought from the notes. The accuracy of diagnosis was tested by comparing the results with a consultant's review of a sample of patients. Patients were sent questionnaires to elicit further demographic details and assess their levels of disability using the Health Assessment Questionnaire, which we have previously found useful.⁹ It gives a range of scores from 0 to 3 in eight activity areas (dressing and grooming, rising, eating, walking, hygiene, reach, grip, and household activities) which may be analysed as separate components or averaged to give an overall disability score from 0=no disability to 3=severe disability.

The general practitioners' assessment of available rheumatological facilities was assessed by a simple five item questionnaire, which covered distance to the referral centre and time taken to travel, adequacy of public transport, availability of a specialist rheumatologist, and a global rating of adequacy.

Results

Table 1 describes the samples, and the practices from which they were derived. Agreement on diagnosis between general practitioners and hospital consultants was achieved in 78% of a sample of 44 patients whose notes, radiographs and laboratory results were reviewed by a consultant. When a global assessment schedule was used practices B and C felt that their access to rheumatological facilities was good or adequate and practices A and D did not. This assessment related principally to waiting time for first appointments as it did not depend upon distance to hospital, journey time, or adequacy of public transport. A proportionately greater number of patients with rheumatoid arthritis were attending the hospital clinic than any other major diagnostic groupings, but neither distance nor access to facilities had any effect on the proportion of patients attending hospital clinics in the previous year.

Table 2 shows the numbers of cases identified

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Table 1 Practice and sample characteristics

Characteristic	Practice				Overall
	A	B	C	D	
List size	8646	6061	3089	5504	23 300
Records searched	2962	2921	1472	1380	8 735
Sample studied	1:3	1:2	1:2	1:4	
% Of practice over age 65	13.1	9.0	12.3	12.5	
% Of practice women	51.2	51.9	50.8	52.1	
Practice area	Inner city	Urban	Market town	Suburban	
Rheumatologist available in local hospital	Yes	Yes	No*	Yes	
Distance to hospital (km)	8	27	140	8	
Patients' journey time (min)	30-40	60	120	20	
Adequate public transport	Yes	Yes	No	No	
% Of cases attending hospital outpatient clinics	8.6	6.0	9.6	11.9	
Overall GP rating of services	Inadequate	Good	Adequate	Inadequate	
HAQ† scores (95% confidence intervals)					
All diagnoses	0.92 (0.84 to 1.0)	0.84 (0.78 to 0.90)	0.61 (0.52 to 0.7)	0.68 (0.53 to 0.83)	
Rheumatoid arthritis	1.54 (1.22 to 1.86)	1.72 (1.48 to 1.96)	1.13 (1.02 to 1.24)	1.06 (0.68 to 1.44)	

*Doctor with an interest in rheumatology available.

†HAQ=Health Assessment Questionnaire.

Table 2 Observed disease prevalence

Diagnosis	Practice				Overall
	A	B	C	D	
Rheumatoid arthritis					
Number	11	16	16	6	49
Prevalence (%)	0.37	0.55	1.09	0.43	0.56
95% CI*	0.15 to 0.59	0.28 to 0.82	0.55 to 1.63	0.08 to 0.78	0.40 to 0.72
Localised osteoarthritis					
Number	64	88	43	11	206
Prevalence (%)	2.16	3.01	2.92	0.8	2.36
95% CI	1.63 to 2.69	2.38 to 3.64	2.04 to 3.8	0.32 to 1.28	2.03 to 2.67
Generalised osteoarthritis					
Number	54	72	50	19	195
Prevalence (%)	1.82	2.46	3.40	1.38	2.23
95% CI	1.33 to 2.3	1.86 to 3	2.45 to 4.33	0.77 to 2.03	1.91 to 2.55
Gout					
Number	7	8	4	4	23
Prevalence (%)	0.24	0.27	0.27	0.29	0.26
95% CI	0.05 to 0.41	0.08 to 0.46	0 to 0.54	0 to 0.58	0.15 to 0.37
Psoriatic arthritis (number)	2	2	1	0	5
Reiters syndrome (number)	0	1	0	0	1
Ankylosing spondylitis (number)	0	2	0	1	3

*CI=confidence interval.

Table 3 Effect of access to services on some aspects of management

GP assessment of access*	Total (%) using aids and appliances (n=482)	Total (%) using complementary treatments (n=482)	Total (%) using second line drugs (n=46)
Good/adequate (n=303)	82 (27.1)	31 (10.2)	7 (21.9)
Inadequate (n=179)	55 (30.7)	20 (11.2)	4 (28.6)

*For those using second line drugs the general practitioners' assessment of access was good/adequate for 32 and inadequate for 14.

and the percentage prevalence of different diagnoses in the study practices.

Table 3 shows the results of the record search and questionnaire. Patients in the practices with good or adequate rheumatological access were no more likely than those in the other two practices to use aids or second line drugs, and neither were these patients less likely to be current users of steroids or alternative medicines.

As expected, disability as measured by the Health Assessment Questionnaire was highest in patients with rheumatoid arthritis, and comparison of disability scores (table 1) showed no great differences between the practices, either when rheumatoid arthritis was considered alone or when the overall disability score was considered, though practice C (the furthest from rheumatological access) had significantly lower overall disability levels.

Discussion

General practice is an appropriate setting in which to consider the impact of rheumatic disorders at a community level because general practitioners have a complete denominator (practice population) and a numerator comprising 'active diagnoses'. Hospital based studies can only describe those patients who attend hospital clinics and therefore tend to include patients with more severe disease.⁸ Community based studies if sufficiently extensive and expansive will include all cases and even those with trivial disease.¹⁰ In this study a 78% agreement between consultants and general practitioners was achieved for the diagnosis.

Assessment of adequacy of rheumatological facilities was, of necessity, subjective. All general practitioners were quite satisfied with the care their patients received when attending hospital clinics. Dissatisfaction was expressed, however, where waiting times for first appointments were up to six months. This must be emphasised—adequacy refers to availability not clinical ability.

No real differences were found between practices in the variables studied, though this may in part be because of the small numbers in this study. From such data it can be calculated that to detect a difference in disability scores of 0.2 (range 0-3, mean 0.8) in all patients when comparing the practices with good access and

those with poor access the number of patients in each group needs to be about 446. Where power=95%, significance level is $p<0.05$, and the standard deviation of the scores is 0.83.¹¹ For the study variables where numbers are much smaller—for example, the use of second line drugs by patients with rheumatoid arthritis, the number required for a full evaluation of any differences found would be correspondingly larger. In addition, differences in age and sex between the practices would have to be taken into account before any definite conclusions could be drawn.

If general practitioners are to exercise their 'lynch pin function of identifying the need for disability services'¹² they will need to do this not only for individual patients but for the population they serve. The general practitioners taking part in this study perceive that rheumatologists provide a useful service and they request greater numbers of consultant teams with whom they might cooperate to improve the care offered to patients with rheumatic diseases. This study indicates that it is feasible to collect information on the effectiveness of service provision in general practice, but more resources need to be devoted to gathering data from larger numbers of practices.

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