Barriers to Providing Adequate Rheumatology Care: Implications from a Survey of Rheumatologists in Ontario, Canada

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ABSTRACT. ***Objective.*** To determine what, if any, barriers exist that prevent rheumatologists from providing adequate rheumatology care.

Methods. All 158 identified rheumatologists in Ontario were sent a self-administered questionnaire and followed up by telephone.

Results. The response rate was 83%. All but 6 rheumatologists reported at least one barrier to the provision of service. The 3 most commonly reported barriers were the cost of drugs for patients (83%), billing policies and regulations for consultation and followup visits (72%), and long waiting times for patients (61%). Rheumatologists reporting the latter had significantly longer waiting times (12 vs 4 wks) for new non-urgent patients, although there was no difference for new patients with inflammatory arthritis. Nearly three-quarters of respondents had changed the patterns of their practice over the last 3 years, with significant increases in the amount of independent medical services (e.g., third party billing) and pharmaceutical company work. The majority (89%) of responding rheumatologists reported having at least some difficulty in making ends meet from rheumatology practice alone and 28% found it was not possible.

Conclusion. These results indicate that the majority of rheumatologists face significant barriers to providing adequate care. Given the recruitment and service provision concerns in Canada, these barriers to service need to be addressed to ensure adequate provision of care. (J Rheumatol 2002;29:2420–5)

Key Indexing Terms:
RHEUMATOLOGY
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Currently there is no cure for arthritis but with appropriate management, the disability, loss of function, and pain resulting from arthritis can be significantly reduced[1]. A comprehensive strategy for managing arthritis and related conditions should include primary care services, specialist and hospital services, community and rehabilitation services, and health education[2]. It is argued that forms of arthritis with potential for serious complications, such as rheumatoid arthritis (RA), should be managed in consultation with a rheumatologist, while osteoarthritis and nonarticular rheumatism can be adequately managed by well trained primary care physicians[3-5].

With the prevalence of arthritis in the developed world around 12–15%[6-9] and rising[10], the demand for various health care providers is substantial. For example, over one-third of individuals with arthritis or a related condition living in Ontario, Canada, reported visiting a specialist in a one year period, compared with only 20% of individuals with other chronic conditions (Ontario Health Survey 1996/97)[8]. Data from the same survey also indicate that more people with arthritis felt they did not receive the required health care for their condition compared to those with other chronic conditions. The debate around how many physicians are currently needed to provide adequate health care in Canada has so far produced no universally agreed upon figure[11-14], and this issue is confounded by the observation that research and academic commitments result in rheumatologists spending varying amounts of their time in clinics[15]. It has also been suggested that the required number of physicians is ultimately determined on social rather than technical grounds[16]. Notwithstanding the difficulties

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predicting how many physicians will be required in the future, it is probably safe to say that the demand on health-care services in disciplines with a large elderly patient base, like rheumatology, is set to increase as the population ages[10]. The Canadian Council of Academic Rheumatologists[17] predicted that Canada will require a rheumatology manpower increase of 64% by the year 2026 if the recently recommended target of 1.9 rheumatologist per 100,000 population is to be met. The same organization has also stated that the current rate of recruitment of rheumatologists is insufficient to maintain the current manpower level, let alone future needs.

Arthritis is universally recognized as having a considerable impact on the community[6,9,18-20]. Therefore, it is important to determine if the issues regarding rheumatology service provision translate into barriers to providing adequate care. A survey of all rheumatologists in Ontario was carried out in 2000 to monitor rheumatology service provision. Here we report the current perceived barriers to providing adequate rheumatology care.

MATERIALS AND METHODS

Survey participants. Two hundred twelve potential subjects were identified through the mailing list of the College of Physicians and Surgeons of Ontario, directory listings of the Canadian Rheumatology Association, and lists of recent graduates from rheumatology training programs across Ontario.

Questionnaires. All identified rheumatologists were sent a self-administered, semistructured questionnaire containing 22 questions, as well as stamped, addressed return envelopes, in October 2000. Telephone followup of nonresponders commenced 4 weeks after the initial mail-out.

The first section of the questionnaire (referred to as the Practice Patterns questionnaire) was based on questions used in the Arthritis Community Research and Evaluation Unit (ACREU) surveys of rheumatologists conducted in 1992 and 1997[15,21,22], and contained questions relating to the practice location, volume and composition, the rheumatologist's specialty, and educational background. In the second section of the questionnaire (referred to as the Barriers questionnaire), which was developed through discussion with practicing rheumatologists, respondents were asked what barriers, if any, impede their ability to practice rheumatology as they would like (see Table 2 for complete list of suggested barriers); how the recent billing policy changes of the Ontario Health Insurance Plan (OHIP), which provides universal health coverage for physician visits, has influenced the quality of service; and what changes in practice patterns and volume have occurred in the previous 3 years.

Statistical analysis. The survey data were analyzed using SPSS for Windows, release 9.0.0. Comparisons were made using chi-square or nonparametric sample comparisons (Mann-Whitney U or Kruskal-Wallis H). The significance levels were determined using Bonferroni's correction to account for multiple comparisons. The University Health Network Research Ethics Board approved the study.

RESULTS

Respondents. Of the 212 subjects contacted, 54 were ineligible for the study because they either answered no to the screening question: Are you involved in out-patient/ambulatory practice with rheumatology patients? (n = 5), were retired (n = 4), had moved out of Ontario (n = 11), were on longterm leave (n = 3), were not certified rheumatologists (n = 12), were deceased (n = 1), were still training (n = 11), or were not practicing medicine (n = 7). The final 158 subjects included all physicians who had received training in rheumatology and whose practice consisted of rheumatology care, even if they did not have accreditation in rheumatology (this accreditation did not exist prior to 1972). Rigorous telephone followup ensured that all eligible rheumatologists completed the Practice Patterns questionnaire.

One hundred thirty-one rheumatologists (82.9%) also completed the Barriers questionnaire. The only significant difference between those completing only the Practice Patterns questionnaire and both questionnaires was that the former had more clinics per week (Table 1). The characteristics of the eligible Ontario rheumatologists are shown in Table 1.

Barriers to service. The most commonly reported barrier to provision of adequate care was financial, such as affordability of drugs to patients, followed by billing policies/regulations for consultation and followup visits, and long waiting times (Table 2).

The amount a specialist, the majority of whom practice under the fee-for-service system, can bill for a consultation with a patient varies according to the depth and involvement of the visit. Recently, however, regulations have been introduced in Ontario that stipulate the maximum number of in-depth consultations that the rheumatologists can bill for each patient in any given year. Subsequent assessments are paid at a lesser rate. Of the 123 respondents to this question, only 3 rheumatologists (2%) indicated that these policy changes were beneficial, while 53% felt that the changes had adversely influenced the quality of care. The remaining 55 respondents (45%) indicated that there had been no change in service quality as a result of the policy change. The single most common unprompted barrier to service was inappropriate referral, which accounted for 27% of all barriers suggested by the respondents. Other unprompted barriers included inappropriate administration and workload.

Access to rheumatology service. Rheumatologists were asked to differentiate between the average waiting time for new non-urgent ambulatory patients (described as new non-urgent patients) and new ambulatory patients with likely inflammatory arthritis (described as new patients with inflammatory arthritis). The median waiting time for new non-urgent patients was substantially longer (Table 3) and more variable between rheumatologists (interquartile range = 8.5 weeks) than for new patients with inflammatory arthritis (IQR = 2 weeks). The majority of rheumatologists reported having difficulties scheduling followup appointments, and fewer than half could accommodate urgent referrals all of the time (Table 3).

Nearly two-thirds of respondents identified long waiting

Table 1. Characteristics of rheumatologists in Ontario obtained from practice patterns questionnaire.

	Completed Both Questionnaires, n = 131	Nonresponders to Barriers Questionnaire, n = 27	All Rheumatologists, n = 158
Women, n (%)	42 (34)	8 (42)	50 (35)
Rheumatologists practicing out of more than one location*, n (%)			
2 locations	18 (14)	4 (15)	22 (14)
3–5 locations	7 (6)	2 (7)	9 (6)
Primary clinics in regions with population < 400,000, n (%)	19 (15)	8 (30)	27 (17)
Rheumatologists with faculty appointment, n (%)			
Full time	43 (33)	6 (23)	49 (32)
Part time	28 (22)	7 (27)	35 (23)
Rheumatologists with subspecialty, n (%)	37 (30)	14 (56)	51 (34)
Adult patients, % of practice	95	94	95
Mean years of practice as rheumatologist	16	16	16
Median clinics per week	7	10**	7
Ability to see urgent referrals within a week, n (%)			
Yes—all the time	52 (41)	14 (56)	66 (43)
Yes—most of the time/occasionally	73 (57)	10 (40)	83 (55)
Rarely/never	2 (2)	1 (4)	3 (2)

* Clinics held within the same town are considered the same location Analysis excludes missing values. Using Bonferroni correction significance level set at p = 0.005. **p = 0.0001.

Table 2. Reported barriers that prevent Ontario rheumatologists practicing as they would like.

	Respondents, n = 127 (%)
Financial barriers such as affordability of drugs to patients	105 (83)
Billing policies/regulations for consultation and followup visit	92 (72)
Long waiting times (for rheumatology service)	77 (61)
Lack of access to allied health professionals	70 (55)
Nonreferral by GP	56 (44)
No access to hospital beds	52 (41)
None	6 (5)
Other	26 (21)

Table 3. Indicators of ease of access to the rheumatology care provided by rheumatologists in Ontario in 2000

Median waiting time for non-urgent ambulatory patients	8 weeks
Median waiting time for likely inflammatory ambulatory patients	2 weeks
Rheumatologists with difficulties scheduling followup appointments, n (%)	75 (59)
Ability to see urgent referrals within a week, n (%)	
Yes—all the time	66 (43)
Yes— most of time/occasionally	83 (55)
Rarely/never	3 (2)

Analysis excludes missing values.

times as a barrier to providing adequate care (Table 2). The median waiting time for new non-urgent patients for these rheumatologists was nearly 3-fold higher than for those that did not indicate that waiting time was a barrier (11.5 vs 4 wks; $p < 0.0001$). However, the waiting times for new patients with inflammatory arthritis were not significantly higher for these rheumatologists (2 vs 1.5 wks for rheumatologists not identifying waiting times as a barrier).

Not surprisingly, more rheumatologists reporting long waiting time as a barrier reported difficulties scheduling followup appointments (75 vs 31% of rheumatologists not reporting waiting time as a barrier; $p < 0.0001$) and had slightly more problems accommodating urgent referrals ($p = 0.032$; data not shown).

Changes in rheumatology practice. Nearly two-thirds of respondents indicated that their practice had increased in volume in the previous 3 years and nearly three-quarters had changed their patterns of practice (Table 4), most often in increasing the proportion of independent medical services (e.g., third party billing for insurance companies and workers' compensation) and pharmaceutical company work. These areas provide an opportunity to bill at a higher rate than government-reimbursed clinical practice. Nearly two-thirds of rheumatologists reported at least some difficulty in making ends meet through rheumatology practice alone without resorting to third party billing and pharmaceutical trials: over one-quarter found it was not possible (Table 5).

DISCUSSION

Almost all the responding rheumatologists perceived at least one current barrier to providing adequate rheumatology care. The most commonly reported barrier was affordability of drugs for the patient. The studies reporting on the direct financial cost of arthritis[23-26] have consistently found it to be substantial; one study of the literature from Europe and

Table 4. The number and percentage of Ontario rheumatologists in 2000 who experienced a change in the volume or pattern of their practice in the previous 3 years.

Changes in the volume of practices in the previous 3 years, n = 124 (%)		
	Increasing	76 (61)
	Decreasing	9 (7)
	No change	34 (27)
	Other	5 (4)
Changes in the patterns of practices in the previous 3 years, n = 123 (%)		
	No changes	34 (28)
	Changes	89 (72)*
Of the Rheumatologists Who Experienced a Change in the Patterns of Their Practice:		
		% of Respondents Who Experienced an
Practice areas	Increase	Decrease
Emergency (hospital)	38	62
General internal medicine	35	65
Medical-legal	70	30
Independent medical services	85	15*
Pharmaceutical company	84	16*

* $p < 0.0001$. Analysis excludes missing values.

Table 5. The number of Ontario rheumatologists in 2000 who had difficulties making ends meet from rheumatology practice alone without resorting to third party billing or pharmaceutical trials.

	N = 123 (%)
Easily	9 (7)
With some difficulty	38 (31)
With a lot of difficulty	36 (30)
Not possible	35 (28)
No opinion	5 (4)

North America reported a value of $5,425 per patient with RA per year (1998 US$)[27]. Although the hospitalization costs account for a large proportion of direct costs[28], the major cost to the individual, at least in Canada, will be medications since all Canadian residents are covered for hospital admissions under provincial health insurance plans. Outpatient drugs are paid for by the individual directly or through private, employer-paid or government-sponsored drug insurance plans (which in Ontario covers those 65 years of age and older). However, 31% of people in Ontario, Canada, do not have any form of drug insurance (Badley EM, 1996/97 Canadian National Population Health Survey Analysis, 1998; unpublished data). In addition, the formulary for the government drug insurance plan for those over 65 is not comprehensive. The costs of drug treatments are increasing with the development of new drugs such as biologics for RA (etanercept, a recently licensed biologic, costs roughly $17,200 Cdn a year). Programs offering financial help for uninsured drugs, rehabilitation technology, and services (e.g., assistive devices, homemaking, and transportation) are limited and generally difficult to negotiate.

The second most commonly reported barrier to provision of adequate care was the provincial billing policies for consultation and followup. In particular, the majority of rheumatologists indicated that the recent policy changes relating to reimbursement for in-depth consultations have a detrimental impact on the quality of service. A significant proportion of patients with conditions such as RA require close monitoring of the condition and/or the effects of the treatment. This entails multiple time-consuming followup visits to the rheumatologist. These data suggest that the current fee schedule does not have the flexibility to reimburse the specialist adequately for treating such patients.

The single most frequently suggested barrier in the "other" category was inappropriate referrals. It has been long recognized that the referral process is not optimal in many health care systems[29-31]. The specifics of the referral problems were not detailed in the responses, but some of the problems with the referral process highlighted in the literature are that consultation with another specialist is more appropriate, that evaluation by the general practitioner has not been performed[32] or that results have not been provided, that the timing of the referral is not appropriate, and that ongoing treatment is appropriate[32,33]. Many studies have found that primary care physicians are also dissatisfied with the referral process, the main complaint being lack of appropriate communication with the specialist after the consultation[31,34].

While long waiting times are not universal to all practices, over two-thirds reported that long waiting times were a barrier to provision of care. This observation is supported by a survey of family physicians in Ontario that showed that primary care physicians perceived long waiting times as a barrier to referral[3,21].

This survey of Ontario rheumatologists stratified waiting times for new patients with and without probable inflammatory arthritis. The considerably shorter waiting times for new patients with inflammatory arthritis indicated that

rheumatologists give them priority, which is entirely appropriate. Given that prioritizing occurs in rheumatology practice, it would be important to measure waiting times stratified by arthritis type when determining the effectiveness of any initiatives to increase access to rheumatology service.

From the data it is clear that a substantial number of rheumatologists had been experiencing changes over the previous 3 years, in both the volume and the type of work in which they were engaged. A significant proportion of rheumatologists had increased the amount of the more lucrative independent medical services and pharmaceutical work, although the long waiting times for rheumatology services indicate that the rheumatologists are not expanding into this type of work as a result of patient shortages. The observation that the majority of rheumatologists reported having at least some difficulty making ends meet from rheumatology practice alone suggests that the current remuneration package may be in part responsible for the observed changes patterns of rheumatology practice. Prashker and Meenan[35], who compared the longterm financial returns for the additional training for rheumatology and gastroenterology with general internal medicine in the USA, found that the additional training invested in becoming a rheumatologist resulted in negative returns in terms of salary, while a gastroenterologist received extremely large salary returns for the training investment.

When drawing conclusions from this study, the self-report form of the questionnaire should be considered. The barriers reported here are those perceived by the rheumatologists and may be different from those perceived by patients, primary care physicians, or other healthcare professionals. The power of the analysis was limited by a small number of subjects in some categories. The hours of clinic time reported by the nonresponders were greater than those by the responders, and more nonresponders tended to have subspecialties (although this did not reach significance); it is not clear what influence this would have on the barriers to service reported here.

In conclusion, the principal barrier to providing adequate rheumatology care identified by rheumatologists in Ontario is the inability to prescribe the most appropriate treatment because of the financial cost of the treatment for the patient. These data also suggest that many rheumatologists are increasing the amount of work they do in areas that provide additional income because the provincial fee schedule does not allow rheumatologists to spend the required time with complex patients and be sufficiently remunerated from clinical practice alone. Given that there are concerns regarding the recruitment of rheumatologists, these identified barriers to service provision need to be addressed in order to attract to the field of rheumatology the numbers of physicians needed to provide an adequate level of care.

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