Care Partnerships Between Family Physicians and Rheumatologists

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ABSTRACT. ***Objective.*** To describe care partnerships between family physicians and rheumatologists.

Methods. A random sample (20%, n = 478) of family physicians was mailed a questionnaire, asking if there was at least 1 particular rheumatologist to whom the physician tended to refer patients. If the answer was affirmative, the physician would be considered as having a "care partnership" with that rheumatologist. The family physician then rated, on a 5-point scale, factors of importance regarding the relationship with that rheumatologist.

Results. The questionnaire was completed by 84/462 (18.2%) of family physicians; 52/84 (61.9%) reported having rheumatology care partnerships according to our definition. Regarding interactions with rheumatologists, most respondents rated the following as important (score ≥ 4): adequate communication and information exchange (44/50, 88.0%); waiting time for new patients (40/50, 80.0%); clear and appropriate balance of responsibilities (39/49, 79.6%); and patient feedback and preferences (34/50, 68%). Male family physicians were more likely than females to accord high importance to personal knowledge of the rheumatologist, and to physical proximity of the rheumatologist's practice. Regarding relationships with rheumatologists, 30/50 (60.0%) of respondents felt communication and information exchange were adequate, and 35/50 (70.0%) felt they had a clear balance of responsibilities.

Conclusion. Almost two-thirds of family physicians have rheumatology care partnerships, according to our definition. In this partnership, establishing adequate communication and shorter waiting time seem of paramount importance to family physicians. A balanced sharing of responsibilities and patients' preferences are also valued. Although many physicians reported adequate communication and clear and appropriate balance of responsibilities in their current interactions with rheumatologists, there appears to be room for improvement. (First Release June 15 2011; J Rheumatol 2011;38:1981–5; doi:10.3899/jrheum.101150)

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Chronic illnesses create a huge financial and social burden in our society. To lessen this burden, we must focus on how care is managed. A prime example is seen in rheumatoid arthritis (RA), a devastating disease affecting up to 1% of the Canadian population[1]. Aggressive, early treatment usually initiated by a rheumatologist can slow or prevent joint damage[2]. The rheumatologist, in turn, should provide support and advice to the patient and primary care physician. Optimal care for RA hinges upon early referral to a rheumatologist and the family physician's ongoing involvement.

Family physicians' referral behaviors are influenced by access to, and relationships with, the specialist physicians in their region[3]. However, little is known regarding what happens after the referral — that is, what defines shared care partnerships between family physicians and specialists. Some care partnerships may be driven by a personal relationship, and others by the sharing of knowledge and responsibilities.

Our primary research objectives were to identify existing shared care ("rheumatology care partnerships") between family physicians and rheumatologists, and the elements that encourage such collaboration.

MATERIALS AND METHODS

We selected a random sample (20%, n = 478) of family physicians from the mailing list of the Quebec College of Family Physicians (N = 2393). All these family physicians were practicing within the McGill University Integrated Health Network (RUIS) at the time the mailing list was created. A survey package was sent, including a personalized cover letter, an English or French questionnaire (depending on the physician's preference, recorded by the College), and a stamped, addressed return envelope. Two waves of followup mailings, at an interval of 2 weeks, were sent to initial nonrespondents.

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The questionnaire (provided as an Appendix) asked the physician to indicate whether there is a rheumatologist (or more than one) to whom the family physician tended to refer patients. If this was the case, that family physician was considered to represent the "rheumatology care partnership" model of practice. Physicians who did not identify a rheumatologist were retained for the study to represent the "nonpartnership" model of practice. The questionnaire further asked the family physician to rate, on a 5-point scale, factors of importance related to that relationship with the rheumatologist. Data collection included elements that have been shown previously to influence shared care between family physicians and specialists: physician demographics, organizational factors, and accessibility[3,4,5].

We calculated overall descriptive statistics of the family physicians who identified rheumatology care partnerships, and compared their demographics (age, sex, year of graduation, and practice setting) with those family physicians who did not identify a partnership. Practice variables included single versus group practice, and academic versus private setting. We also performed multivariate logistic regression to explore potential factors independently associated with the existence of rheumatology care partnerships, and with the factors that family physicians and rheumatologists consider as most important in their care partnership interactions.

RESULTS

Of the 478 family physicians, 11 were excluded because they did not have an active general family practice, and 5 physicians were excluded because they held a restrictive permit of practice in Quebec and were no longer in practice at the address given. Of the remaining 462 physicians, 84 completed the questionnaire, for a response rate of 18.2%. There was a trend toward more female and more English respondents, compared to the established demographics as of 2007 (Table 1). The respondents also tended to be academic-based, as compared to the family physician demographics recorded by the College in 2007.

Table 1. Characteristics of survey respondents compared with all Quebec family physicians. Data are from the Collège des médecins du Québec[6]. All data are percentages.

Characteristics	Respondents	All Quebec Family Physicians
Language		
English	36	26
French	64	74
Sex		
Female	61	44
Age		
≤ 40 yrs	85	75
Specialty certification		
Family medicine	81	53
Other	19	47
Practice setting†		
Academic	31	19
Private	36	57
Solo	15	22
Group	54	50
MD obtained		
Before 1975	14	21
1975–1994	68	58
1995–2006	16	20
After 2006	3	N/A

† The combined percentage exceeds 100%, as some respondents indicated more than one category. N/A: not available.

Of the 84 respondents, 52 (61.9%) reported having rheumatology care partnerships according to our definition. Among them, 43/52 (82.7%) indicated having patients with RA in their practice, 3 did not have such patients, 4 were unsure, and 2 did not provide an answer. Of the remaining 32 physicians who did not report care partnerships, 16 (50.0%) had patients with RA in their practice and 15 (46.9%) did not (1 physician was unsure). After adjusting for age, sex, academic status, and graduation year in a multivariate logistic regression model, those who completed the English questionnaire were more likely to report having a rheumatology care partnership (adjusted OR: 4.9; 95% CI: 1.6 to 15.1). We did not observe any other physician characteristic to be associated with partnership status.

Regarding factors of importance in interactions with rheumatologists, most respondents rated the following factors as important (score ≥ 4/5): adequate communication and information exchange (44/50, 88.0%); waiting time for new patients (40/50, 80.0%); clear and appropriate balance of responsibilities (39/49, 79.6%); and patient feedback and preferences (34/50, 68%). Around half the respondents (23/50, 46.0%) accorded high importance to their personal knowledge of the rheumatologist. Regarding their actual relationships with rheumatologists, 30/50 (60.0%) of respondents felt communication and information exchange were clear and appropriate, and 35/50 (70.0%) felt they had a clear balance of responsibilities.

Among those who rated factors of importance, stratified analyses (Table 2) indicated that male respondents, compared to females, tended to give high importance (score ≥ 4/5) to the following elements: personal knowledge of the rheumatologist and physical proximity of practice. Physicians older than 40 years were more likely to assign high importance to clear and appropriate balance of responsibilities, and patient feedback and preferences. Regarding their actual relationships with rheumatologists, male respondents were more likely to report that communication and information exchange were clear and adequate. However, in the multivariate linear regression model that adjusted for age, sex, language, academic status, and graduation year, we could not establish independent differences in the responses of the family physicians according to demographics (likely related to power issues).

DISCUSSION

Rheumatic diseases are commonly encountered by family physicians. A cross-sectional study in Norway[9] found that 45% of patients with RA sought advice from their family physician. However, family physicians may have limited experience in rheumatology care, as they feel knowledge in this field is not their priority[10]. In a study involving presentation of a fictional scenario[11], when asked about what sources of information the family physician would use, 19% said jour-

Table 2. Comparison of family physicians' ratings, stratified by demographics.

A. Factors of Potential Importance in a Rheumatology Care Partnership	Percentage of Group Who Rated Factor as Important (Score ≥ 4)	Percentage Difference (95% CI)†
Personal knowledge		
Male vs female	67 vs 34	32 (4, 54)
Not academic vs academic practice	56 vs 25	31 (1, 52)
Family medicine vs other certification	57 vs 13	44 (6, 62)
Balance of responsibilities		
Age > 40 yrs vs ≤ 40	85 vs 50	35 (0, 67)
Waiting time		
Not group vs group practice	92 vs 69	22 (0, 43)
Proximity of practice		
Male vs female	44 vs 13	32 (7, 55)
Patient feedback		
Age > 40 yrs vs ≤ 40	75 vs 33	42 (2, 68)
B. Actual Relationship with Rheumatologists		
Balance of responsibilities		
Male vs female	89 vs 59	30 (3, 48)
Information exchange		
Not private vs private practice	70 vs 41	29 (0, 52)

† Only the most significant differences (where CI excluded the null value) are shown in the table. Ninety-five percent CI for the difference between 2 independent proportions[7,8].

nals or textbooks and 8% said a discussion with a colleague, versus 73% who would refer to a rheumatologist. Another study examined the main reasons for rheumatology referral by family physicians. The most common medical reasons cited were uncertainty about the diagnosis, a need for advice about treatment, and a need for a diagnostic or therapeutic procedure. Other reasons included the need to comply with a standard of care, a patient request, the physician's desire to learn, to obtain patient education, or to reassure or motivate the patient[12].

Most family physicians, in our study, had a specific rheumatologist to whom they tend to refer patients. Regarding factors of importance related to interaction with the rheumatologist, the reasons for selecting a particular specialist, from our study, in rank order according to importance rating, were similar to those found by Forrest, *et al*[5] in the United States. In previous studies[5,13], personal knowledge of the physician was considered to be the prime reason for selecting a particular specialist. However, many of our respondents, especially women (who represent a growing number of family practitioners), did not cite this reason as important. In Quebec there is an increasing number of female medical students graduating each year[14]. Our study presents an interesting comparison, in that two-thirds of male physicians rated personal knowledge of a rheumatologist as high in importance (score > 4/5), while almost two-thirds of female physicians assigned this factor low importance (score < 2/5). Female physicians also tended to rate the "proximity of the specialist to the family physician's practice" component very low.

The previous literature does suggest that differences may exist between male and female physicians regarding factors of most importance when referring to a specialist. One study of family physicians in the United States showed a slight trend for male versus female family physicians to place more importance on patient convenience and location of the specialists' office[15]. One potential explanation is that the demographics of female physicians' practices may be different (e.g., they may treat more socioeconomically disadvantaged and vulnerable patients, or a more elderly clientele, for whom financial and transportation barriers are important). It is well-documented that female physicians may spend more time communicating with patients[16], and possibly this allows them to better understand the financial and transportation considerations that patients have when they are being referred to a specialist.

Kinchen, *et al*, in the study of family physicians in the United States[15], observed a slight trend for male physicians, when choosing a specialist, to place greater importance (as compared to female physicians) on previous experience with a specialist. That finding may be in part driven by the striking preference that male family physicians reported in ensuring that specialists returned patients to the care of the family physician.

Communication and information exchange regarding patient issues were rated as the most important dimensions of care partnerships by our survey respondents. Though around two-thirds of respondents expressed satisfaction with rheumatologists regarding this aspect, a third did not. A survey assessing communication between generalists and specialists in the Netherlands[17] found similar dissatisfaction. Indeed, half of generalists who responded to that survey felt their questions were not addressed adequately by the specialist, and that the

specialist's report contained insufficient details on treatment and followup.

Sharing of responsibilities was also considered to be very important by our respondents. Our study also showed that the majority of family physicians were satisfied on this front, and that responsibilities were clear and appropriately balanced. However, room for improvement remains.

We acknowledge the limitations of our study. The response rate for our questionnaire was not high enough to safely consider our sample as being representative of all family physicians in Quebec. Although the profile of respondents shared many similarities with the family physician population of Quebec (Table 1), there may have been a bias toward women (although since our survey was administered in 2010, the difference may simply be changing demographics) and toward academic-based practitioners. Our respondents might have been biased toward physicians interested in new models of care management and/or musculoskeletal diseases. Despite these potential biases, we believe our data provide some new and useful insight into the interactions between family physicians and rheumatologists.

Many of our family physician respondents have a rheumatology care partnership, according to our definition. Factors of importance to family physicians in this context include adequate information exchange on patient issues, short waiting time for referrals, and a clear and appropriate balance in responsibilities.

REFERENCES

1. Power JD, Badley EM. Ambulatory care services. In: Badley EM, DesMeules M, eds. Arthritis in Canada: an ongoing challenge. Ottawa: Health Canada; 2003:51-64.
2. Quinn MA, Conaghan PG, Emery P. The therapeutic approach of early intervention for rheumatoid arthritis: What is the evidence? Rheumatology 2001;40:1211-20.
3. Ontario Ministry of Health and Long-Term Care. Evaluation of primary care reform pilots in Ontario. Phase 2 Interim Report. PriceWaterhouseCoopers; 2001.
4. Franks P, Williams GC, Zwanziger J, Mooney C, Sorbero M. Why do physicians vary so widely in their referral rates? Gen Intern Med 2000;15:163-8.
5. Forrest CB, Nutting PA, Starfield B, von Schrader S. Family physicians' referral decisions: Results from the ASPN referral study. J Fam Pract 2002;51:215-22.
6. College of Family Physicians of Canada. National Family Physician Survey—Regional Report (Québec). Mississauga, Ontario: College of Family Physicians of Canada; 2007.
7. Newcombe RG. Interval estimation for the difference between independent proportions: comparison of eleven methods. Stat Med 1998;17:873-90.
8. Wilson EB. Probable inference, the law of succession, and statistical inference. J Am Stat Assoc 1927;22:209-12.
9. Hagen KB, Bjorndal A, Uhlig T, Kvien TK. A population study of factors associated with general practitioner consultation for non-inflammatory musculoskeletal pain. Ann Rheum Dis 2000;59:788-93.
10. Rat AC, Henegariu V, Boissier MC. Do primary care physicians have a place in the management of rheumatoid arthritis? Joint Bone Spine 2004;71:190-7.
11. Stross JK. Relationships between knowledge and experience in the use of disease-modifying antirheumatic agents. A study of primary care practitioners. JAMA 1989;262:2721-3.
12. Donohoe MT, Kravitz RL, Wheeler DB, Chandra R, Chen A, Humphries N. Reasons for outpatient referrals from generalists to specialists. J Gen Intern Med 1999;14:281-6.
13. Berendsen AJ, Benneker WH, Meyboom-de Jong B, Klazinga NS, Schuling J. Motives and preferences of general practitioners for new collaboration models with medical specialists: a qualitative study. BMC Health Serv Res 2007;7:4.
14. Burton KR, Wong IK. A force to contend with: The gender gap closes in Canadian medical schools. CMAJ 2004;170:1385-6.
15. Kinchen KS, Cooper LA, Levine D, Wang NY, Powe NR. Referral of patients to specialists: factors affecting choice of specialist by primary care physicians. Ann Fam Med 2004;2:245-52.
16. Bertakis KD, Helms LJ, Callahan EJ, Azari R, Robbins JA. The influence of gender on physician practice style. Med Care 1995;33:407-16.
17. Berendsen AJ, Kuiken A, Benneker WH, Meyboom-de Jong B, Voorn TB, Schuling J. How do general practitioners and specialists value their mutual communication? A survey. BMC Health Serv Res 2009;9:143.

APPENDIX: FAMILY PHYSICIAN SURVEY: PARTNERSHIPS FOR RHEUMATOLOGY CARE

I. Your demographics and practice setting: (Please circle all that apply)

Demographics		Practice setting:		MD obtained	Specialty certification
Male	Female	Academic	Private	Before 1975	Family medicine
				1975-1994	Other_____
Age ≤40	Age ≥40	Solo	Group	1995-2006	Other_____

II. Identifying care partnerships in rheumatology:

Do you tend to refer your patients to one (or two) specific rheumatologist (s)? **Yes** **No**

- *If you answered "**No**", please proceed to the end of the survey.*
- *If you answered "**Yes**", please complete section III.*

III. Professional relationships between family physicians and rheumatologists: We wish to study the relationship between family physicians and rheumatologists. Below are sets of questions; some capture ***how important*** a given aspect is, the other describes ***your actual relationship*** with the rheumatologist(s) you most often refer to. Please **circle** the most appropriate answer for each.

Rheumatologist #1: In this relationship, in general how important to you is each of the following aspects?	**Importance** **Least**				**Most**
Personal knowledge of this physician (e.g. interactions in settings outside your practice, including previous contact during your professional training, or more recent interactions on committees, continuing medical education, etc.)	1	2	3	4	5
Clear and appropriate balance of responsibilities (e.g. each physician fulfilling the roles they feel make best use of their knowledge and skills)	1	2	3	4	5
Adequate communication / information exchange regarding patient issues	1	2	3	4	5
Waiting time for new patients.	1	2	3	4	5
Physical proximity of your practice to the rheumatologists practice	1	2	3	4	5
Patient feedback/patient preference.	1	2	3	4	5
	Applies **Not at all**				**Completely**
Do the following describe your actual relationship with the rheumatologist?	1	2	3	4	5
There are clear and appropriate balance of responsibilities	1	2	3	4	5
There is adequate communication regarding patient care issues	1	2	3	4	5

Rheumatologist #2: In this relationship, how important is each of the following? [Complete only if you usually refer to more than one rheumatologist]	**Importance** **Least**				**Most**
Personal knowledge of this physician (e.g. interactions in settings outside your practice, including previous contact during your professional training, or more recent interactions on committees, continuing medical education, etc.).	1	2	3	4	5
Clear and appropriate balance of responsibilities (e.g. each physician fulfilling the roles they feel make best use of their knowledge and skills).	1	2	3	4	5
Adequate communication regarding patient care issues.	1	2	3	4	5
Waiting time for new patients.	1	2	3	4	5
Physical proximity of your practice to the rheumatologists practice.	1	2	3	4	5
Patient feedback/patient preference.	1	2	3	4	5
	Applies **Not at all**				**Completely**
Do the following describe your actual relationship with the rheumatologist?	1	2	3	4	5
There are clear and appropriate balance of responsibilities	1	2	3	4	5
There is adequate communication regarding patient care issues	1	2	3	4	5