Factors influencing attendance at a new multidisciplinary inflammatory arthritis education program

Perspective from a community-based program. Keystone E, Ahluwalia V, Bajaj S, Joshi R, Keystone C, Larsen T, Lu Y.

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ABSTRACT

Background

Although multidisciplinary patient education programs for patients with inflammatory arthritis have been shown to be beneficial, there are few data on factors that may influence patient attendance in such programs.

Objectives

To identify factors which may influence patient referral and attendance in a new community-based multidisciplinary Inflammatory Arthritis (IA) education program.

Methods

Patients who attended the program, who were referred to the program but did not attend, and who were not referred from three community Rheumatology practices were retrospectively identified. Data on patient age, sex, distance from education program site, season, first language, highest education level, disease duration, swollen joint count and diagnosis were abstracted from the charts. In the case of patients who did not attend the program, the given reasons were also recorded from the patient chart.

Results

From the initiation of the clinic in October 2006 – April 2008, data were collected on 71 patients who attended the clinic and 140 patients who did not attend. Patients who attended the full education program were significantly more likely to speak English as their first language, live closer to the clinic and have shorter disease duration. They were also more likely to attend in summer or spring than in winter.

Non-attendance at the clinic was related to transportation issues (54 patients), work issues (23 patients) weather (13 patients), concurrent family issues (8) and language issues (8). Highest formal education data were available on 118 of the patients. Patients with a maximal education level of high school or less were significantly less likely to be referred for the education program than those with a higher education level, however there was no significant affect of education level on attendance at the clinic (P=0.25).

Conclusions

Patients who attended the education program were more likely to speak English as their first language, have shorter disease duration and have been referred in summer or spring vs. winter. Non attendence of the education program was related to distance, language issues, work issues, weather, transportation issues and lack of interest. How these factors can be modified needs to be further studied.

Background

Education for patients with Rheumatoid arthritis has been found to be beneficial in terms of disability, joint counts, patient global assessment, psychological status (Riemsma et al), and function (Mathieux). However, data on patients who do not attend such education programs (either because they do not get referred or get referred and then do not attend) is limited.

A multidisciplinary inflammatory arthritis program was established at the Headwaters Health Care Centre in Orangeville, Ontario (approximately 80 km Northwest of Toronto) in October 2006. The program consisted of teaching on the inflammatory arthritis by a Rheumatologist, as well as sessions by a pharmacist, physiotherapist, and occupational therapist. Patients were primarily referred to this program by three rheumatologists in the nearest community, approximately 40 km away.

It was noted that many patients agreed to be referred for this education program but did not attend, and that many declined referral. This study was designed to look at factors which may determine attendance and referral to the program with an ultimate view of improving patient participation and attendance.

Methods

Patients who attended the program, who were referred to the program but did not attend, and who were not referred from the three community Rheumatology practices were retrospectively identified. Data on patient age, sex, distance from education program site, season, first language, highest education level, disease duration, swollen joint count and diagnosis were abstracted from the charts. In the case of patients who did not attend the program, the given reasons were also recorded from the patient chart.

Only patients with active inflammatory arthritis at the time of referral were counted in the analysis. Patients who attended the full program at the closest available date to their referral were counted as "referred and attended", while those who did not attend the closest available date were counted as "referred, not attended" and patients who declined referral were counted as "not referred". Patients who only attended part of the education program were not counted in the analysis.

Statistical analysis was by SAS version 9.1 (SAS Institute Inc., Cary NC, USA).

Results

During the study period, 71 patients attended the program and 140 did not. Patients who attended the program lived closer and had a shorter disease duration than those who did not, lived closer to the site of education and hard a shorter disease duration (Table 1). When patients who did not attend are separated on the basis of "referred and did not attend" and "not referred" vs. "referred and attended" the differences between the three groups did not reach statistical significance. (Table 2).

Patients were more likely to be referred to the education program if they had a shorter disease duration, spoke English as their first language, or had an education level> High school. (Table 3).

Actual attendance at the program was associated more likely if patients spoke English as their first language, had a shorter disease duration, or were referred in Spring or Summer. Patients with an education level < High school were as likely to attend the education program as those with a higher education level (P<0.25) (Table 4)

Non-attendance at the clinic was related to transportation issues (54 patients), work issues (23 patients) inclement weather (13 patients), concurrent family issues (8) and language issues (8).

There were no differences in the groups in terms of diagnosis nor any other patient characteristics between the three referring rheumatologists.

Table 1

Characteristics of patients with inflammatory arthritis who attended the IA clinic and who did not attend the IA clinic. Average (median) data are presented.

	Attended Program	Did not Attend Program	X^2 (P value)
Age (years)	53.9 (54)	56.8 (59	1.53 (0.2165)
Distance from clinic (km)	21.0 (21.5)	24.4 (23.9)	5.03 (0.02549)
Swollen Joints (range)	9.1 (7.0) (1-30)	9.3 (7.0) (1-37)	0.02 (0.877)
Disease Duration (years)	2.7 (1.0)	4.6 (2.9)	4.28 (0.0387)

Table 2

Characteristics of patients with who were referred and attended, were referred and did not attend, and were not referred to the IA clinic. Average (median) data are presented.

	Referred and Attended (n=71)	Referred did not Attend (n=73)	Not Referred (n=67)
Age (years)	53.9 (54)	56.8 (59)	59.8 (61.0)
Distance from clinic (km)	21.0 (21.5)	24.4 (23.9)	24.6 (25.8)
Swollen Joints (range)	9.1 (7.0) (1-30)	9.3 (7.0) (1-37)	8.4 (6.5) (1-28)
Disease Duration (years)	2.7 (1.0)	4.6 (2.9)	5.3 (3.0)

Table 3

Characteristics of patients with inflammatory arthritis associated with Referral to the IA education program.

	Odds Ratio	95% C.I.	Probability
Disease Duration	0.938	0.888-0.992	0.025
First Language = English	2.078	1.119-3.859	0.021
Age	0.973	0.953-0.994	0.010
Distance from Clinic	0.961	0.926-0.998	0.037
Highest Education < High School	0.292	0.115-0.741	0.008

Table 4

Characteristics of patients with inflammatory arthritis associated with Attendance at the IA Clinic.

	Odds Ratio	95% C.I.	Probability
First Language = English	3.013	1.485-6.114	0.003
Season			0.011
Summer vs. Winter	5.867	1.950-17.648	
Spring vs. Winter	2.813	1.21-6.536	
Disease Duration	0.917	0.844-0.995	0.039
Distance from Clinic	0.961	0.924-1.000	0.049

Conclusions

- Education programs for patients with inflammatory arthritis have been found to be beneficial in terms of disability, joint counts, patient global assessment, psychological status (1), and function (2).
- However, there is little data or formal study of factors which may influence patient referral and attendance to such education programs.
- Although this study is a retrospective single-centre analysis, it has an advantage of being a community "real life" experience of all patients who are referred to an education program.
- Other studies have noted, similar to our study, that many patients do not attend education programs because of distance, work, family issues, and concurrent illness (3, 4).
- Younger patients with shorter disease duration are more likely to attend, and even though patients with lower education levels are less likely to be referred, they are just as likely to attend the program.
- Season-related attendance may relate to the location of the current program, and bears further study.
- How, and to what degree these factors may be modifiable to increase patient attendance and participation in such education programs will need to be further studied.

Central West
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References

1. Riemsma RP, Kirwan JR, Taal E, Rasker JJ. Patient education for adults with rheumatoid arthritis. *Cochrane Database of Systemic Reviews* 2003; **2**.
2. Mathieux R, Marotte H, Battistina L, Sarrazin A, Berthier M, Miossec P. Early occupational therapy programme inceased hand grip strength at 3 months: results from a randomized, blind, controlled study in early rheumatoid arthritis. *Ann Rheum Dis* 2009; **68**: 400-403.
3. Hammond A, Bryan J, Hardy A. Effects of a modular behavioural arthritis educationprogramme: a pragmatic parallel-group randomized controlled trial. *Rheumatology* 2008; **47**: 1712-1718.
4. Giraudet-Le Quintrec J-S, Mayoux-Benhamou A, Ravaud P, Champion K, Dernis E, Zerkak D, Ouslimani A, Courpied, J-P, Revel M, Kahan A, Dougados M. Effect of a collective education program for patients with rheumatoid arthritis: a prospective 12-month randomized controlled trial. *J Rheum* 2007; 34: 1684-91.