

# A Pilot Study of a Standardized Rheumatology Referral Form

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**Abstract:** *Objective:* To evaluate a standardized rheumatology referral form.

*Methods:* Our study population consisted of all family physicians at two family medicine clinics in Montreal (66 physicians in total). We evaluated family physicians' knowledge about RA and behavior in response to a vignette case, before and after the implementation of a standardized rheumatology referral form within the two family medicine clinics.

*Results:* Before the implementation of the rheumatology referral form, only 16 out of the 44 respondents (36.4%, 95% Confidence Interval, CI, 23.8 to 51.1) had a high suspicion of RA, meaning that just over a third of respondents were able to correctly identify a potential RA case. Six months after the form was introduced, 13 out of the 19 respondent (68.4%, 95% CI: 46.0 to 84.6) said they had a high suspicion of RA. This percentage remained constant as long as a year later, when 68.8% of physicians had a high suspicion of RA (11 out of the 16 respondents, 95% CI, and 44.4 to 85.8).

*Conclusions:* Though not definitive, our results seem to suggest that a standardized rheumatology referral form may be a practical and effective way to increase awareness of RA.

**Keywords:** Rheumatology referral, rheumatoid arthritis.

## INTRODUCTION

Rheumatoid Arthritis (RA) is a potentially devastating disease with widespread synovial inflammation which, without early and aggressive treatment, can lead to major joint destruction and disability. Disease progress can be slowed dramatically, and perhaps even reversed, if treated promptly with disease-modifying anti-rheumatic drugs (DMARDs) [1]. Thus, early and accurate recognition of the disease and quick referral to a rheumatologist is of the utmost importance.

Problems with RA care pathways have already been well documented, including long wait times for rheumatology consultation [2]. In addition, the referral forms written by physicians often do not follow the guidelines provided by agencies such as the Canadian Rheumatology Association and lack important

information necessary for the appropriate triaging of patients [3].

To combat these problems, a standardized rheumatology referral form [4] was developed at our centre. This form was created in partnership with both rheumatologists and family physicians. Development began after a focus group study [4], which indicated a standardized rheumatology referral form as a possible way to "improve care trajectories". The form was implemented in two family clinics in Montreal. This form was developed with input from both family physicians and rheumatologists at the MUHC. It placed emphasis on specific aspects of the patient's history and the physician's physical findings. Duration and presence of morning stiffness and swelling, location of painful joints, disturbance of sleep, weight loss, and current and prior treatments were all included on the form.

The long-term goal of this standardized referral form was to optimize the time between patient diagnosis and referral to a rheumatologist. The form also served as an educational tool for physicians as it included information about urgent symptoms characteristic of

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RA which indicates that a patient should be referred to a rheumatologist without delay. To establish the usefulness of the intervention, we evaluated the family physicians knowledge about RA and behaviour in response to a vignette case, before and after implementation of the standardized referral form. Our hypothesis was that the intervention would result in increased awareness of the key symptoms of RA among family doctors, as well as potentially reducing the time between patient diagnosis and referral to a rheumatologist.

## METHODS

Our study population consisted of all family physicians at two family medicine clinics in Montreal (66 physicians in total). We evaluated family physicians' knowledge about RA and behaviour in response to a vignette case, before and after the implementation of a standardized rheumatology referral form within the two family medicine clinics.

In our evaluation, we provided a descriptive story of a person with classic symptoms of RA, and asked for physician responses. First, the physicians were asked what their level of suspicion for RA was (high, moderate, low, or couldn't say). Then, they were asked to specify which elements of the patient's history and physical symptoms made them more likely to suspect RA. Finally, the physicians were asked how they would respond to a suspected case of RA. The evaluation contained multiple questions that allowed more than one response. For example, physicians could check off multiple ways in which they would react to a case where they had a high suspicion of RA.

The evaluation was distributed both by regular mail and email, with options for either direct responses using a website link, or by completing and returning a paper copy. During the entire period, the clinics' examination rooms were kept stocked with the referral forms, but no other intervention took place. We present the data for the evaluations performed at 6 and 12 months after the intervention, compared to baseline.

## RESULTS

Before the implementation of the rheumatology referral form, only 16 out of the 44 respondents (36.4%, 95% Confidence Interval, CI, 23.8 to 51.1) had a high suspicion of RA, meaning that just over a third of respondents were able to correctly identify a potential RA case. Six months after the form was introduced, 13

out of the 19 respondent (68.4%, 95% CI: 46.0 to 84.6) said they had a high suspicion of RA. This percentage remained constant as long as a year later, when 68.8% of physicians had a high suspicion of RA (11 out of the 16 respondents, 95% CI, and 44.4 to 85.8).

The baseline evaluation indicated that most (81.8%, 36/44, 95% CI, 68.0 to 90.5) physicians would have at least some suspicion of RA if presented with classic symptoms, although the majority of physicians would still ask the patient to undergo further laboratory testing (95.9%, 42/44, 95% CI, 84.8 to 98.7). The results of the follow-up evaluations suggested favourable trends in the evolution of the physicians' behaviour. For example, at baseline, 20/44 physicians (45.5%, 95% CI, 31.7 to 59.9) would have waited for all the test results to come back and be reviewed before referring to a rheumatologist. At the end of the year, we found, physicians were more likely to refer the patient on the same day that they suspected RA, and only 6 of 16 respondents, (37.5%, 95% CI, 16.3 to 64.1) would have delayed referral until all the laboratory results had come back and been reviewed.

## DISCUSSION

This study is a novel undertaking which, though not definitive, seems to suggest that a standardized rheumatology referral form may be a practical and effective way to increase awareness of RA and possibly to improve care for patients with a possible new diagnosis of RA. The standardized referral forms were also meant to increase the ease with which patients could be triaged [3], to allow additional reduction in rheumatology waiting times [1]. Altogether, this represents great potential in term of optimizing outcomes for patients with RA, although it must be acknowledged that education of family physicians to identify RA patients better, does not necessarily mean patients will be seen sooner; there must also be adequate rheumatology manpower resources, in order that the referred patients are promptly seen [5].

Still, while the outcome of this evaluation could potentially be pointing to the effectiveness of the rheumatology referral forms, there are a few possible limitations of our study. We did note a substantial drop in participation between assessments. There were 44 participants in the baseline evaluation, which is actually a fairly high response rate for family physicians. However, the subsequent assessments were completed by only about 25% of the targeted sample. One possibility is that physicians who were confident in

their responses and diagnoses are more likely to respond both initially and at follow-up. This may have caused a skew in the results, and hence the percentage of all practicing physicians who were able to correctly identify RA may be much lower than the value represented by reports, especially in the follow-up assessments. However, it is impossible to predict the real direction and magnitude of any bias, if present. Another limitation is our inability to track individual responses of the physicians over time (potentially respondents may have answered both the email and paper version of the evaluation).

Additionally, our assessments featured physician self-report of their behaviour, and may not actually reflect their behaviour in real life. Still, we have conducted focus group analyses with family physicians at the MUHC [4], which suggests that this group is strongly motivated to improve their care, and are eager for tools to help them. The referral form was in fact developed with input from both family physicians and rheumatologists.

Finally, given the relatively small sample size, the precision of our estimates is limited. Hence, though we believe our work suggests interesting trends, a true improvement in the practice of the physicians is not definitive.

The result of our work is interesting for several other reasons aside from these issues. Common literature suggested that family physicians are often uncomfortable prescribing DMARDs because of lack of knowledge and experience [6]. This is supported by our study, which shows that prescription of DMARDs consistently falls in the bottom three responses to a strong suspicion of RA.

To summarize, though not definitive, our results seem to suggest that a standardized rheumatology referral form may be a practical and effective way to

increase awareness of RA and to improve care for patients with a possible new diagnosis of RA. This increased awareness may lead to faster referrals to rheumatologists [2]. Future work will include chart reviews in the relevant jurisdictions to determine whether patients were actually referred to a rheumatologist (and evaluated) in a more timely fashion as a result of these standardized rheumatology forms.

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