Patient-Reported Outcomes in Rheumatoid Arthritis

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KEYWORDS

• Rheumatoid arthritis • Patient-reported outcomes • Questionnaires
• Health domains

KEY POINTS

- Patient-reported outcomes (PROs) and their measures have a long and important history for determining the status and treatment of patients with rheumatoid arthritis (RA).
- The most important and commonly studied RA PROs are also core measures: physical function, pain, and patient global assessment.
- This article describes the history and evolution of PROs for RA and the current state of the field, with key examples of accepted and widely used measures, and offers some reflection on the roles of PROs for the study and management of RA.

WHAT ARE PATIENT-REPORTED OUTCOMES AND WHY ARE THEY IMPORTANT?

Characteristics of rheumatoid arthritis (RA) can be divided into those signs and symptoms that are assessed by the patient, and those that are assessed by someone or something other than the patient. In the latter case, the assessments are considered objective measures of disease activity or damage, like acute phase reactants, the swelling of joints, or the erosions on a radiograph of a hand. In cases of signs and symptoms reported directly by the patient, without interpretation of a third person, clinicians speak of patient-reported outcomes (PROs).[1]

The degree of disease activity and response to treatment are traditionally determined by the evaluation of the RA core set or indices derived thereof.[2–8] The core set contains 3 PROs: physical function, pain, and a global assessment of disease activity. These PROs have been found to be at least as important as other physical and biochemical (more objective) measures in assessing baseline disease status, improvement during

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Rheum Dis Clin N Am 42 (2016) 219–237
http://dx.doi.org/10.1016/j.rdc.2016.01.010 **rheumatic.theclinics.com**
0889-857X/16/$ – see front matter

interventions, or prediction of long-term outcome.[9–13] However, several important areas, such as fatigue and sleep quality, have only recently been identified as important to patients and thus potentially core areas for measurement.[14–19]

Patients with RA no longer depend on their physicians to tell them what to do, but increasingly take charge of their care processes and functions as partners in obtaining relevant information. Patients and professionals bring different skills, values, and experiences to research.[20–23]

This article gives an overview on the growth and current value of PRO research in RA, the application of research findings into daily clinical practice, and the gap between PRO research and practice that needs to be filled in the coming years.

HISTORY OF PATIENT-REPORTED OUTCOMES IN RHEUMATOID ARTHRITIS

RA has a rich history of PRO research and still is at the forefront of PRO measure (PROM) development and patient participation in research activities. One of the most characteristic symptoms of RA, pain, was first described as an important outcome at the beginning of the nineteenth century, when therapy for RA was mostly nonpharmacologic, with the exception of salicylates (what are now known as nonsteroidal antiinflammatory drugs) such as ibuprofen and diclofenac, but with a less favorable safety profile[24] and of limited efficacy.

With the introduction of gold compounds in the twentieth century[25,26] and the discovery of the so-called disease-modifying antirheumatic drugs (DMARDs) sulfasalazine and hydroxychloroquine,[27–29] as well as glucocorticoids,[30,31] the development of outcomes in RA research became more and more important. One of the first initiatives in outcome research was that of Steinbrocker and Blazer,[32] who developed the therapeutic score card for RA. This method included the patient global assessment of disease activity, as well as joint tenderness, pain, and functional status. In 1956, Lansbury[33] developed the Systemic Index, the first numerical method to assess and compare disease activity between patients. This index included a measure of duration of morning stiffness, a measure of fatigue (hours after rising before onset of fatigue), grip strength, and pain, which was measured as the number of aspirins required for pain relief.

Development of the Health Assessment Questionnaire (HAQ) in 1980, followed by development of a shorter version, the HAQ Disability Index (HAQ-DI), created a revolution in measurement of functional status in RA that is still in use.[34] Years later, Paulus and colleagues[35] developed the Paulus Criteria, including morning stiffness, joint pain, and the patient global assessment. To harmonize the use of outcome measures across RA clinical trials, the American College of Rheumatology (ACR) established a committee to develop the first RA core set of outcome measures. With support of the first Outcome Measures in Rheumatology (OMERACT) meeting in 1992, consensus was reached, resulting in the ACR core set that includes 3 PROs: pain, patient global assessment of disease activity, and functional status.[3,36]

Although already included in the systemic index of Lansbury,[33] it was not until recently that fatigue was identified as one of the most important problems identified by patients with RA, and it has proved highly reliable, sensitive to change, and an independent determinant of disease activity.[15–19] Although fatigue is not part of the ACR core set, OMERACT endorsed fatigue in their core set[15] in 2006, and the European League Against Rheumatism (EULAR) and ACR recommended reporting fatigue in the domain of disease activity in every RA randomized controlled trial (RCT).[2] Although most clinicians agree that morning stiffness is typical for RA, duration of morning stiffness was excluded from the recent update of both the ACR classification and remission criteria.[37,38] Although the importance of the symptom was acknowledged, it was