

Rheumatoid arthritis: should we shift the focus from “Treat to Target” to “Treat to Work?”

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Rheumatoid arthritis (RA) is a chronic inflammatory disorder characterized by progressive inflammatory synovitis and destruction of articular cartilage and marginal bone. Joint erosion can be seen within 6 months of disease onset in the majority of patients and occurs more rapidly in the first year than in late-stage disease [1]. Historical studies have demonstrated that moderate disability within 2 years of diagnosis is not uncommon, and up to 30 % of patients may be unable to work after 10 years [2]. Improvement in disability, as measured by Health Assessment Questionnaire (HAQ) disability index scores, can be demonstrated in the short term with DMARD therapy, but the magnitude of this improvement is substantially greater among patients with early disease than among those with more advanced disease [3]. Longitudinal studies of RA patients show that there is a progressive decline in HAQ scores with time [3, 4]. Early interventions that prevent irreversible damage would appear to offer the best opportunities for achievement of favorable outcomes in patients with early, aggressive RA. In early intervention studies that measured radiographic progression, this therapeutic window can be as small as a few months [5, 6]. In addition to early therapy, combination treatment has been shown to result in more favorable short-term and long-term outcomes than monotherapy [5, 7].

RA poses a significant burden to patients, their caregivers and employers, and the government. Work disability often arises early in the course of the disease. According to several prospective studies, 20–35 % of individuals had to stop working within 2–3 years of disease onset [2, 8]. After 5–10 years, the reported work disability rate is approximately 40 % [9].

Aggressive therapy can also help to preserve the workability of RA patients. In a study by Klimes et al. published in 2011 [10], it was noted that patients on biologics reported less reduction of daily activities (39.8 %) than patients on DMARDs (50.5 %), reflecting around 53.6 % higher productivity costs for the latter group. Similarly, we recently showed that the use of biologics improved workability scores in RA in a cross-sectional study of 120 patients from three different hospitals in Saudi Arabia [Janoudi N, Almoallim H, Husien W, Noorwali A, Ibrahim A. (2012) Workability and work instability evaluation in Saudi patients with rheumatoid arthritis. *Arthritis Care & Research*, unpublished]. Indeed, we observed that RA patients on conventional therapy had significantly lower work quality, quantity, and satisfaction scores than those receiving biological therapy.

In a study published in 1996, Mau et al. [11] showed that the fastest decline in the employment rate among RA patients was found within the first 3 years of the disease onset, with a 3-year employment rate reduced to 73±5 %. This reflects the importance of early and aggressive management of RA if workability is the main treatment goal. This observation was further confirmed by Puolakka and collaborators [12], who concluded that prompt induction of remission enabled maintenance of work capacity. Their results revealed that the median numbers of work disability days per patient-year from 6 through 60 months of follow-up were 0 for ACR70 achievers, 4 for ACR 50 achievers, 16 for ACR 20 achievers, and 352 for ACR20 non-achievers.

Over the past 15 years, rheumatologists have developed and witnessed many paradigmatic changes in the treatment of RA.

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Recently, a task force of rheumatologists and patients developed a set of recommendations on the basis of evidence derived from a systematic literature review and expert opinion. This resulted in ten treat-to-target recommendations [13]. These recommendations describe the treatment goal of achieving remission with low disease activity as an alternative goal in patients with long-standing disease and either explain the extended definition of remission or suggest ways to achieve remission.

Our goal as rheumatologists in Saudi Arabia goes one step further, as we want to ensure that RA patients remain active, working members of Saudi society. Since maintenance of workability remains a major challenge in RA, this is a more stringent objective that makes achieving strict remission a major goal for rheumatologists. Indeed, we recently observed in a cross-sectional study of RA patients in Saudi Arabia that 55 % of RA patients suffered from a >50 % drop in their work quantity, and 65.8 % described a >50 % effect on their workability [Janoudi N, Almoallim H, Husien W, Noorwali A, Ibrahim A. (2012) Workability and work instability evaluation in Saudi patients with rheumatoid arthritis. *Arthritis Care & Research*, unpublished]. Only 5 % of patients stated that RA had no effect on their workability. In fact, as would be expected, work quality, quantity, and satisfaction were significantly correlated with active RA. Zhang et al. [14] found that achieving clinical remission or major improvement may be necessary to significantly affect work outcomes. They observed that ACR70 responders were 72 % less likely to stop working and 55 % less likely to miss work than ACR20 nonresponders. Furthermore, patients achieving DAS-28 remission were 54 % less likely to stop work than those with DAS-28 scores >3.2. Their results also revealed that moderate improvements did not appear to effect work stoppage or missed days after adjustments.

However, valid assessment of the workability and work productivity of RA patients remains a challenge. Until the early 1990s, there was no quantitative measure of health-related work productivity loss due to health problems for the employed population. The National Health Survey assessed workdays missed and whether there was any work limitation, but did not quantify the amount of limitation or its effect on work productivity. Some multidimensional, health-related quality of life questionnaires assessed role impairment, but these instruments did not distinguish work impairment from that in other activities such as housework or school and did not quantify the absolute amount of impairment [15]. These instruments generated qualitative impairment scores, but not quantitative scores.

The Work Productivity and Activity Impairment (WPAI) Questionnaire was created to be a patient-reported quantitative assessment of the amount of absenteeism (work time missed), presenteeism (reduced on-the-job effectiveness), and daily activity impairment attributable to general health (WPAI:GH) or a specific health problem (WPAI:SHP).

The six questions in the WPAI questionnaire were generated from three main sources. First, a review of the work

productivity literature suggested the type of items that should be tested in the questionnaire. Second, comments made by allergic rhinitis patients when responding to the interviewer-administered version of the WPAI items in a series of clinical studies and their responses to different work productivity questions were analyzed [16]. Third, cognitive debriefing of subjects following interviewer administration and self-administration of a disease-specific and general health version of the WPAI items and related work productivity questions helped to determine the final wording of the items. The construct validity and discriminative ability of WPAI:GH have been established in a study of Zhang et al. [17]. Thus, the WPAI:GH is a valid questionnaire for assessing impairment in paid work and activities among RA patients and for measuring the relative differences between RA patients with different health statuses. The WPAI:GH is therefore useful for measuring productivity outcomes in clinical practice.

The WPAI was designed to be generalizable to a broad range of occupations/diseases and evidence of its reliability and validity is available for many musculoskeletal and non-musculoskeletal conditions. Nevertheless, occupations requiring more mobility and physical performance might result in lower WPAI scores, eventually leading to the requirement of more aggressive therapies. Therefore, measurement of patient workability should be carefully weighed. Item content is highly consistent across different versions of the measure (WPAI:GH versus WPAI:SHP), which should facilitate comparison of outcome scores in different studies. It has an intuitive scoring method and is compatible with economic costing (orientation of response is based on the amount of time affected). In addition, the WPAI has low respondent burden [18] and could be easily included in regular clinical practice as it is not time consuming.

Finally, while the new Treat to Target recommendations are widely accepted by rheumatologists worldwide, we strongly believe that the target should also include workability. This represents a valuable patient assessment tool, which should be incorporated into the daily management of RA and monitored as a fundamental targeted outcome for all RA patients. Although further research is warranted to optimize the implementation of workability measures in clinical practice, tools such as WPAI should form an integral part of RA patient assessment along with DAS and HAQ, thus transforming the objective of any management guidelines for RA patients into “Treat to Work.”

Disclosures None.

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