Effect of Patient Reported Outcomes on Changes in DMARD Therapy Among Rheumatoid Arthritis Patients Treated in Routine Clinical Practice

Lauren Stevens, MPH, Kyra Mulder, Zhaohui Su, PhD, Pam Kumparatana, MPH, Stefan Weiss, MD | OM1, Inc, Boston, MA, USA

Background

- Patient-reported outcomes (PROs) are utilized in clinical trials, but additional evidence their benefits in routine clinical practice is needed.
- PROs commonly evaluated by rheumatologists include RAPID-3, a composite score of 3 patient-reported measures: function, pain, and patient global estimate of status.
- PROs provide direct, actionable feedback on treatment effects and symptom control and should guide treatment decisions.

Objective

To evaluate effect of PRO monitoring on therapy decisions, as measured by a change in DMARD, among a cohort of rheumatoid arthritis (RA) patients treated in routine clinical practice.

Methods

Study Design
- Retrospective cohort study from January 2013 through May 2022

Data Source
- OM1 PremiOM RA dataset, including linked healthcare claims and electronic medical records (EMR) data on over 200,000 RA patients seen in rheumatology practices across the US.

Inclusion Criteria
- ≥ 1 prescription/dispensing of a DMARD and switched to, or added on, another DMARD

Methods (cont.)

Outcomes
- Change in DMARD therapy from baseline through 12 months post-index

Methods
- Effect of RAPID-3 score on subsequent change in DMARD therapy assessed by linear regression and Chi-square test.

Results

- 111,605 patients met inclusion criteria (77.6% female, 22.4% male) (**Table 1**)
- 31.5% patients reported ≥ 1 RAPID-3 score during follow-up; 23.8% reported ≥ 2 RAPID-3; 68.5% reported no RAPID-3
- Patients with ≥ 2 RAPID-3 were more likely to change DMARDs then patients with < 2 (26.1% vs. 18.0%, p<0.001) (**Figure 1**)
- Among 22,256 (20.0%) patients who changed DMARD, RAPID-3 scores at 30 days prior to change were worse than RAPID-3 scores at 3 months, 6 months and 12 months post DMARD change (**Figure 2**)

Table 1. Patient Demographics (N = 111,605)

Characteristic		N (%)
Age	Mean (SD)	58.42 (13.5)
	Median (IQR)	59 (50-68)
	Min, Max	13, 89
Sex	Female	86,646 (77.6%)
Race	Asian	1,389 (1.6%)
	Black or African American	9,374 (10.6%)
	Other	1,486 (1.7%)
	White	75,809 (86.0%)
	Unknown	23,547

Figure 1. Correlation Between Frequency of PRO Assessments and Changes in DMARD Therapy

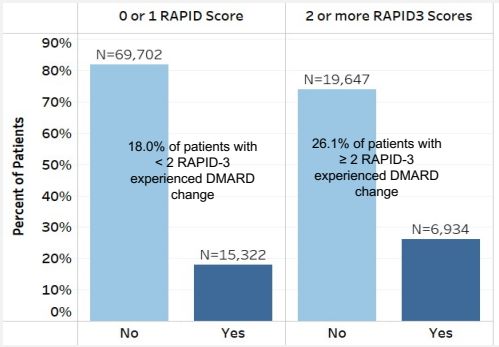
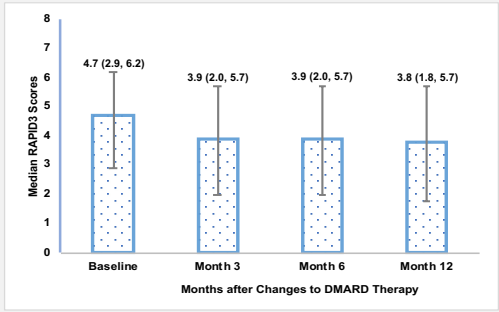


Figure 2. Median RAPID3 scores are lower at 1 year following change in DMARD compared to baseline *(Baseline is 30 days prior to change; vertical bars represent interquartile ranges)*



Conclusions

- **Rheumatologists that routinely monitor PROs (e.g., RAPID3) appear to utilize that information to guide DMARD therapy decisions in RA patients.**
- **Further research is needed to assess the impact of specific DMARDs on improvement in RAPID3 post-treatment switch.**

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