Disease Activity of Patients with Rheumatoid Arthritis in an Integrated Health-System Specialty Pharmacy Setting

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BACKGROUND

- Rheumatoid arthritis (RA) is a chronic inflammatory joint disease affecting approximately 0.6-1% of the adult population in the U.S.[1,2,3]
- About half of all patients with RA use disease-modifying antirheumatic drugs (DMARDs) and they are associated with substantial economic burden, highlighting the need for specialty pharmacy management.[4,5,9,10]
- Annual per-patient costs were estimated to exceed $12,000 across all patients and $36,000 among those treated with biologic DMARDs.[4]
- In an integrated health-system specialty pharmacy (HSSP) settings, the Routine Assessment of Patient Index Data 3 (RAPID3), a patient-reported outcome, is a commonly-used measure for evaluating disease severity among patients with RA.[6,7]

OBJECTIVE

The objective of this study was to describe the disease severity of patients with RA in an integrated HSSP setting.

METHODS

- A retrospective analysis was conducted using the most recent RAPID3 data in 2025 from patients in an integrated HSSP setting with ≥1 assessment during that year.
- Data collected included demographics, US region of care, RAPID3 total score, and RAPID3 component scores for physical function, pain, and patient global estimate.
- Descriptive statistics were used to summarize RAPID3 scores. RAPID3 total scores were also examined by severity category to further characterize disease burden in the study population.

RESULTS

- A total of 425 patients were included in the analysis. The mean (SD) age was 59 (13.5) years and 76.24% (n=324) were female (Table 1).
- The mean (SD) RAPID3 total score was 11.0 (SD=8.44), placing the cohort average at the upper end of the moderate severity range (>6-12) (Table 2).[8]
- By RAPID3 severity category (near remission: ≤3; low severity: >3–6; moderate severity: >6–12; high severity: >12), 24.00% (n=102) of patients were classified as near remission, 7.29% (n=31) as low severity, 21.88% (n=93) as moderate severity, and 46.82% (n=199) as high severity (Figure 1).
- Mean (SD) scores for physical function, pain, and patient global estimate were 2.3 (2.20), 4.5 (3.20), and 4.2 (3.04), respectively (Table 2).

Figure 2: Geographic Distribution of Patients

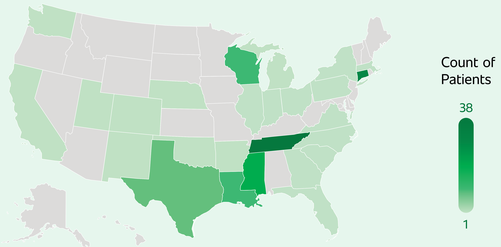

Table 1: Demographics

Number of Patients	425
Completed ≥2 Assessments, n (%)	78 (18.35%)
Age	
Mean	59
Median	60
SD	13.5
Range (low-high)	20-90
Sex, n (%)	
Female	324 (76.24%)
Male	101 (23.76%)
Region, n (%)	
Midwest	23 (5.41%)
Northeast	71 (16.71%)
West	5 (1.18%)
South	326 (76.71%)

Figure 1: Disease severity, based on most recent RAPID3 assessment

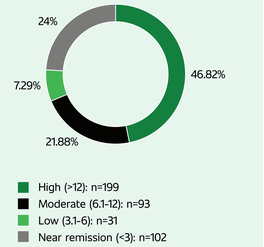

Table 2: RAPID3 scores summary, based on most recent assessment

	N	Mean	Median	SD	Range (low-high)
Total Score	425	11	12	8.44	0-29.33
Physical Functioning Score	425	2.3	2	2.2	0-9.33
Pain Score	425	4.5	5	3.2	0-10
Patient Global Estimate Score	425	4.2	5	3.04	0-10

DISCUSSION

- Although the mean RAPID3 total score fell within the moderate severity range, nearly half of patients were classified as having high disease severity. These findings suggest that many patients with RA and managed under an integrated HSSP model can potentially benefit from close monitoring and pharmacist interventions when appropriate.
- The mean pain score and mean patient global estimate score appeared to be higher than the mean physical functioning score, indicating that symptom burden may be more prominent than functional impairment among the patients in this study.

LIMITATIONS

- The clinical status of patients with RA could not be evaluated longitudinally given the study design.
- Since the study is limited to patients with ≥1 RAPID3 assessment in the study period, selection bias may be present if patients without a RAPID3 assessment differ in a clinically meaningful manner.
- At the time of the study, data on when the RAPID3 was administered relative to treatment initiation, therapy changes, flares, pharmacist interventions, or other events was not available.

CONCLUSION

- This retrospective analysis demonstrates that the RAPID3 can provide a useful snapshot of patient-reported disease burden among patients managed within an integrated HSSP model.
- These findings highlight the potential value of incorporating the RAPID3 into specialty pharmacy practice to better characterize patient status. Future efforts should further explore its value in identifying opportunities for targeted support and intervention.

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