

# Evaluating Health Literacy and Disease Activity in Patients with Rheumatoid Arthritis within Health-System Specialty Pharmacy



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## BACKGROUND

- Health literacy is a critical component of one's health care status as patients with limited health literacy have difficulties managing chronic conditions, poor adherence, and, consequently, higher rates of hospitalization.<sup>1,2</sup>
- For patients with rheumatoid arthritis (RA), research has revealed that patients with higher health literacy have a better understanding of their disease state compared to patients with lower health literacy.<sup>3</sup>
- The health-system specialty pharmacy (HSSP) model has been shown to improve medication access, adherence, and persistence, resulting in optimized clinical outcomes.<sup>4</sup>
- Patient-reported outcome measures (PROMs) are increasingly being utilized in HSSP practice to assess patients' experiences and health status to aid in clinical decision making.

## OBJECTIVES

The purpose of this study is to evaluate the relationship between health literacy and the change in patient-reported RA disease activity after treatment initiation.

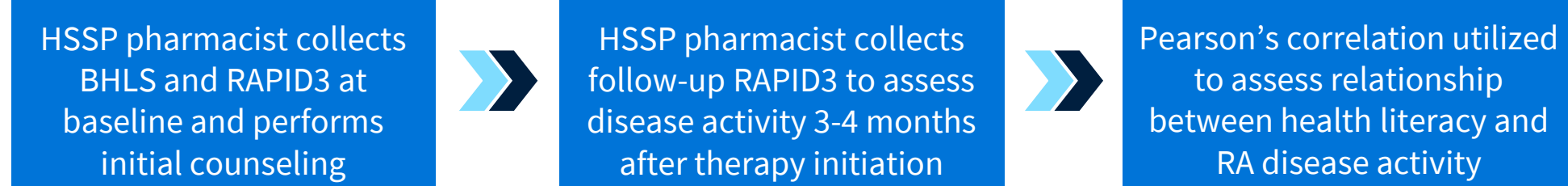
## METHODS

This prospective, observational study from August 2023 to March 2024 utilized two PROMs to determine health literacy and disease severity activity. Patients who were  $\geq 18$  years, enrolled in HSSP clinical services, diagnosed with RA, and initiated on a biologic therapy were included. Those who had a caregiver or refused screening were excluded.

### Assessment PROMs

PROM	Description	Assessments	Scoring
BRIEF Health Literacy Screening (BHLS) <sup>5</sup>	A subjective measure consisting of 4 self-reported items used to identify health literacy in clinical setting.	<ul style="list-style-type: none"> <li>Reading</li> <li>Writing</li> <li>Verbal comprehension</li> <li>Completion of medical forms</li> </ul>	Responses are measured on a 5-point Likert scale.  Total score categorized: <ul style="list-style-type: none"> <li>Inadequate (4 to 12)</li> <li>Marginal (13 to 16)</li> <li>Adequate (17 to 20)</li> </ul>
Routine Assessment of Patient Index Data 3 (RAPID3) <sup>6</sup>	A pooled index of 3 self-reported American College of Rheumatology RA Core Data Set measures, which are used to understand disease severity at baseline and assess improvement or worsening of disease activity.	<ul style="list-style-type: none"> <li>Physical abilities</li> <li>Pain</li> <li>Personal perception of overall health</li> </ul>	Individual measures are scored for a maximum possible score of 30.  Total score determines disease activity: <ul style="list-style-type: none"> <li>High (<math>&gt; 12</math>)</li> <li>Moderate (6.1 to 12)</li> <li>Low (3.1 to 6)</li> <li>Near remission (<math>\leq 3</math>)</li> </ul>

## DATA COLLECTION AND ANALYSIS

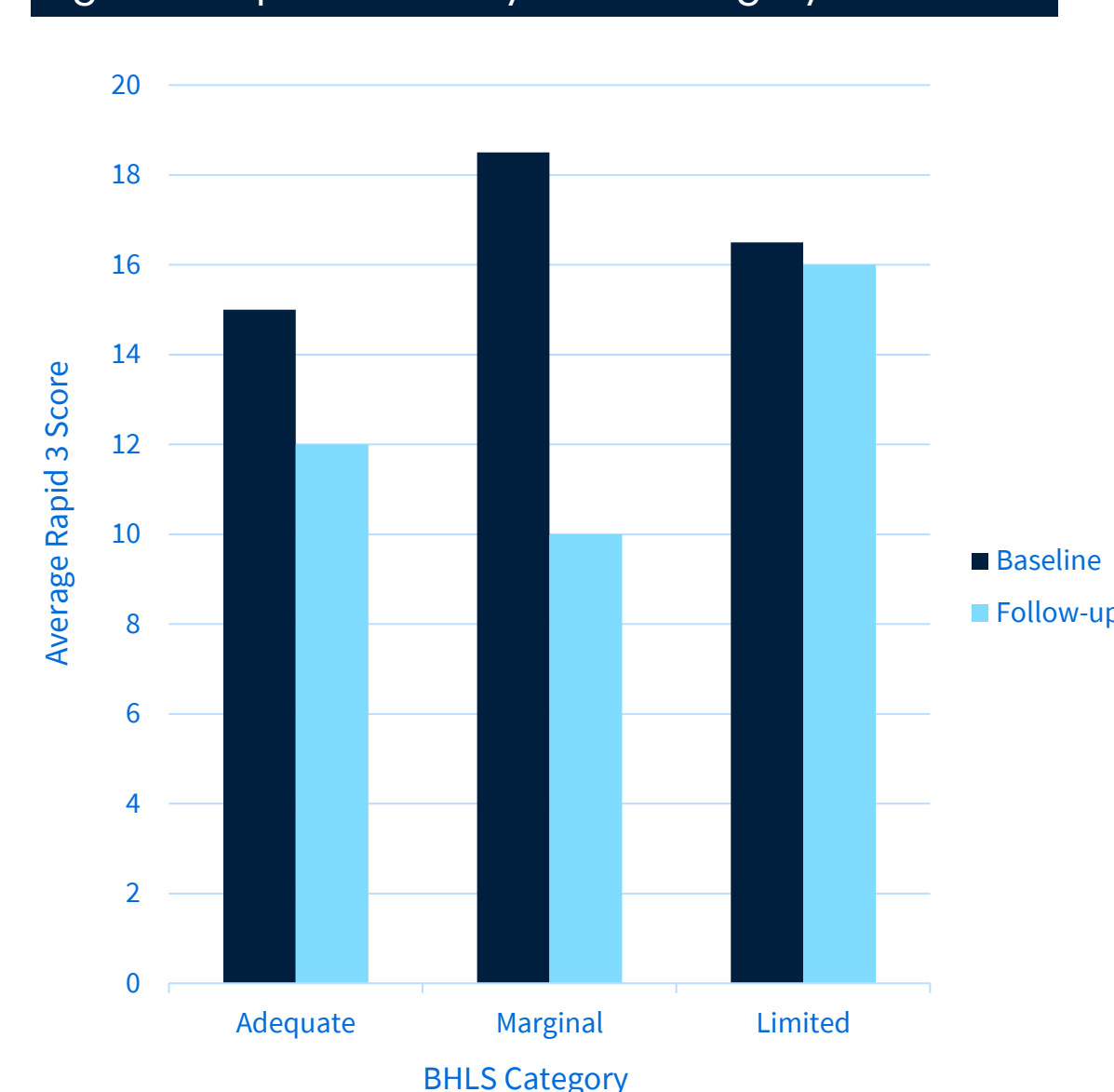


## RESULTS

Table 1. Demographic Information

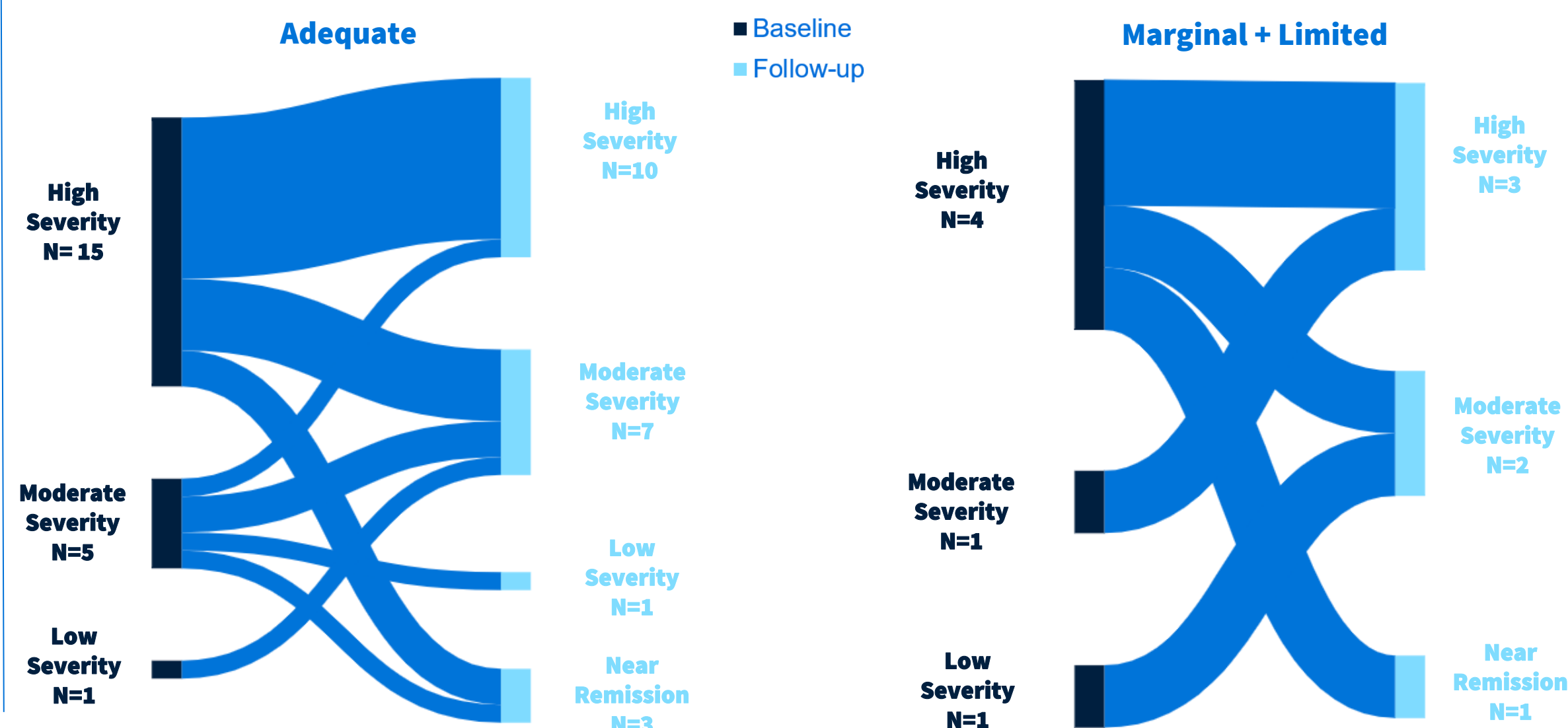
Baseline Characteristics	N=27
Female Sex, n (%)	25 (93%)
Age, median [IQR]	59 [50-59]
Therapies by Drug Class, n (%)	
TNF inhibitor	12 (44.5%)
JAK inhibitor	9 (33.3%)
IL-6 inhibitor	3 (11.1%)
T-Cell inhibitor	3 (11.1%)
Disease Activity Severity Category by RAPID3, n (%)	
High	19 (70.4%)
Moderate	6 (22.2%)
Low	2 (7.4%)
Health Literacy Category by BHLS	
Adequate	21 (77.8%)
Limited	3 (11.1%)
Marginal	3 (11.1%)

Figure 1. Rapid3 Score by BHLS Category



The average change in RAPID3 score was  $-2.7 \pm 7.1$ ,  $-8.3 \pm 13.3$ , and  $-0.9 \pm 4.4$  for adequate, marginal, and limited health literacy categories, respectively. No statistically significant relationship was found between baseline BHLS and the change in RAPID3 score ( $r = -0.12$ ,  $p = 0.57$ ).

Figures 2a and 2b. Changes in Rapid3 Category Based on BHLS Category



## DISCUSSION AND CONCLUSION

There was no relationship found between health literacy and patient-reported RA disease activity. Future studies should expand this evaluation to a larger sample size with a longer follow-up period to understand the relationship between health literacy and RA disease activity. However, this exploratory study highlighted the feasibility of incorporating BHLS into workflow and provided valuable insight to personalize counseling approaches.

### Feasibility and Value from the Pharmacist Perspective

- There are several health literacy screening tools available, but selecting one that is most feasible to incorporate into an HSSP's clinical protocol requires consideration of many factors, including cost, length, mode of delivery, and certification requirements.
- A 5-item questionnaire was utilized to understand the pharmacist perspective on feasibility and value of incorporating health literacy screening:

Pharmacist Perspective: Feasibility	Likert Scale (1=Very Difficult, 5 = Very Easy)
General useability	5
Ability to incorporate into patient conversations	5
Ability to incorporate into daily workflow	4
Pharmacist Perspective: Value	Likert Scale (1=Not Valuable, 5 = Very Valuable)
Patient insight	5
Counseling approach	5

### Future Directions

- There is an opportunity to incorporate health literacy screening using the BHLS tool during all initial counseling sessions to gather an understanding of a patient's health literacy status.
- This information can be used to guide future pharmacist counseling approaches, facilitating delivery of effective communication between pharmacists and patients, optimizing patient care, and improving health outcomes.
- Additionally, formal guidance can be provided to HSSP pharmacists on how to most effectively counsel patients based on differing health literacy categories.

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This study was conducted in collaboration with Pfizer.

