

Chronic Inflammatory Disease: Adherence to Biologics and Healthcare Utilization in a Tertiary Medical Center

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Patients who were prescribed biologics for chronic inflammatory conditions (CIC) at a regional tertiary medical center and who received community-based specialty pharmacy (CBSP) services showed patterns of adherence similar to or higher than those reported in the literature.

OBJECTIVES

- Biologics have become standard treatment for chronic inflammatory conditions (CIC). Biologics are highly effective in controlling symptoms when adherence is optimal. Average rates of adherence vary depending on study, biologic, and CIC: Crohn's disease (71.4%), ulcerative colitis (52.7%), rheumatoid arthritis (46%), psoriatic arthritis (59%), and psoriasis (61%)¹⁻³. Suboptimal adherence may lead to disease flares that can result in excess healthcare utilization.
- The purpose of this study was to describe demographic characteristics, medication adherence, and healthcare utilization patterns among patients who were prescribed biologics for chronic inflammatory conditions (CIC) at a regional tertiary medical center and who received community-based specialty pharmacy (CBSP) services.

METHODS

- **Study Design:** Retrospective study of a joint pharmacy and electronic medical records sample.
- **Study Population:** Adult CIC patients (>18 years; n=175) prescribed biologics at a regional medical center and who filled prescriptions through a CBSP were identified in a joint dataset of pharmacy claims and electronic medical records.
- **Measurement Period:** 01/01/2014-12/31/2016
- **Measures:** Demographic information, disease information (diagnoses, severity), adherence estimates (proportion days covered; PDC), and healthcare utilization (ER visits, hospitalizations).
- **Statistical Analyses:** Means and standard deviations are provided for continuous variables, counts and percentages are provided for categorical variables.

RESULTS

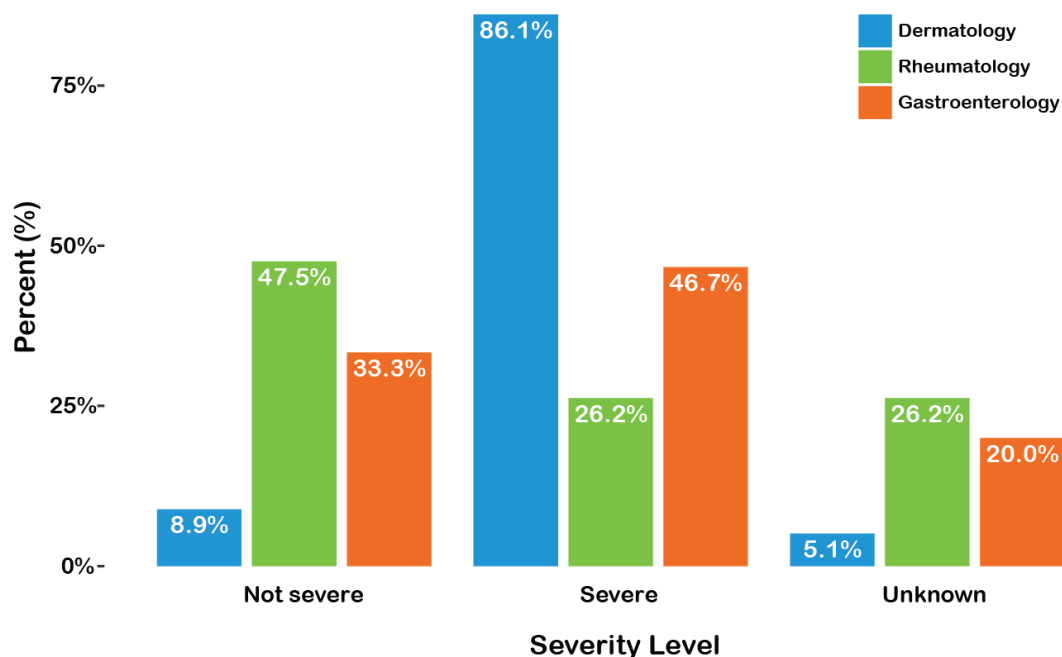
- Patients were predominantly male, white, and were, on average, 43.6 years of age.
- The most common chronic inflammatory conditions were psoriasis, rheumatoid arthritis, and Crohn's disease (Table 1).

Table 1. Sample demographic characteristics.

Variable	(N = 174)	%
Age, year (mean \pm SD)	43.6 \pm 15.6	
Female	81	48.3%
Race – White	111	63.8%
Diagnosis		
Psoriasis	79	45.5%
Rheumatoid Arthritis	41	23.6%
Ankylosing Spondylitis	8	4.6%
Psoriatic Arthritis	7	4.0%
Spondyloarthritis	5	2.9%
Crohn's Disease	19	10.9%
Ulcerative Colitis	11	6.3%
Other	4	2.3%

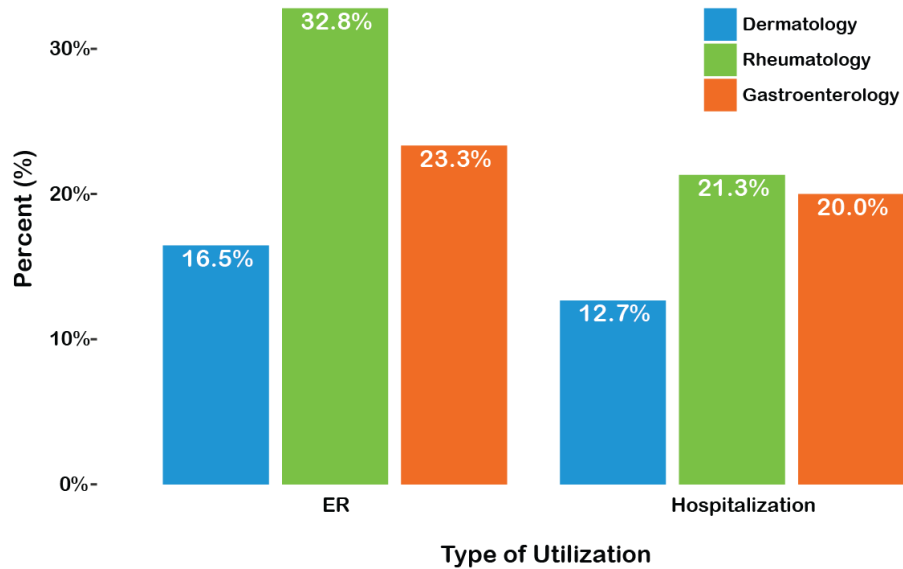
- In total, 79 (45.4%) patients had dermatology CICs (86.1% severe), 61 (35.1%) patients had rheumatology CICs (26.2% severe), and 30 (17.2%) patients had gastroenterology CICs (46.7% severe) (Fig. 1).

Figure 1. Severity by disease category.



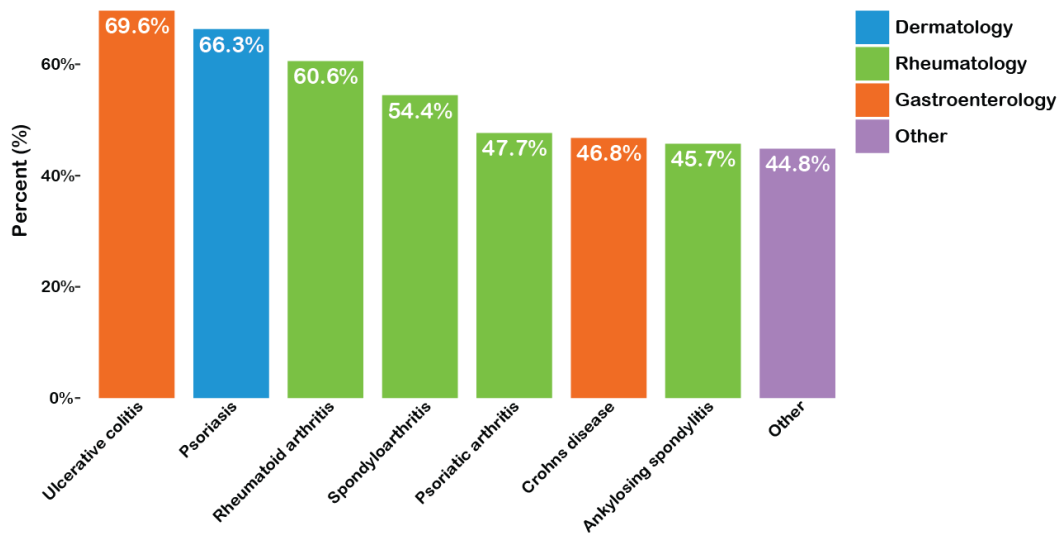
- Rheumatology had the highest proportion of patients with ≥ 1 ER and hospital visits, followed by gastroenterology, and dermatology (Fig 2).

Figure 2. Resource utilization (% patients with ≥ 1 visit).



- With regard to adherence, ulcerative colitis had the highest mean PDC followed by psoriasis, and rheumatoid arthritis. Crohn's disease and ankylosing spondylitis had the lowest mean PDC (Fig 3).

Figure 3. Adherence estimates (PDC) by condition.



- Overall mean PDC was 60.5% (66.3% dermatology, 56.6% rheumatology, 55.2% gastroenterology).

CONCLUSIONS

- At this regional medical center with CBSP services, rates of adherence to biologic therapies for CIC were slightly higher than reported in the literature, yet remained suboptimal. Despite suboptimal adherence very few hospitalizations or ER visits occurred over the study.

References:

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