Real-World Utilization of Targeted Immunomodulators for Chronic Conditions in a Commercially Insured Population

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BACKGROUND

- Chronic immune-mediated conditions such as psoriasis, rheumatoid arthritis, and inflammatory bowel disease impose significant clinical and economic burden[1].
- Targeted immunomodulators (TIMs), which include biologics and oral small-molecule therapies, have advanced disease management by modulating key inflammatory pathways[2].
- Despite strong efficacy demonstrated in clinical trials, real-world evidence on TIM utilization patterns, first-fill behavior, and cost outcomes in commercially insured populations remains limited[3].

OBJECTIVES

- To evaluate real world utilization of targeted immunomodulators (TIMs), including first-fill rates and switching patterns between TIMs.
- To assess treatment persistence and plan and member cost trends (PMPM).

METHODS

STUDY TIMELINE

No prior fills of TIMs
August 1, 2023 – December 31, 2023

Baseline Period → **Study Period**

January 1, 2024 – December 31, 2024
First fills of TIMs

DATA SOURCE

- A retrospective cohort analysis was conducted using the Navitus pharmacy claims database across seven commercial plans.
- Pharmacy and medical claims were evaluated for the period 1/1/2024 - 12/31/2024.

STUDY POPULATION

- **Inclusion criteria**
  - Adults with ≥1 paid pharmacy claim for a targeted immunomodulator (TIM)
  - Documented dermatologic, rheumatologic, or gastrointestinal diagnosis during the study period
    - The most frequently observed conditions included psoriasis vulgaris, psoriatic arthritis, rheumatoid arthritis (including seronegative subtypes), psoriasis, Crohn's disease, ulcerative colitis, and ankylosing spondylitis, representing the predominant clinical profile of the study population.
  - Continuous enrollment with prescription coverage for the full 12-month period
- **Exclusion criteria**
  - Members without confirmed plan eligibility
  - Members missing a documented diagnosis code for TIMs

STATISTICAL ANALYSIS

- Descriptive statistics were used to evaluate TIM utilization, first-fill behavior, and switching patterns.
- Persistence was assessed using a permissible gap of >90 days and was visualized with Kaplan–Meier survival curves.
- Quarterly trends were examined to evaluate the impact of formulary changes and biosimilar adoption.

RESULTS

TABLE 1: BASELINE CHARACTERISTICS

	(N = 472)
Gender	
Female	296 (63%)
Age Distribution	
18–30	57 (12%)
31–50	214 (45%)
51–65	189 (40%)
≥65	15 (3%)
Top 4 Disease States	
Psoriasis	90 (20.3%)
Rheumatoid Arthritis (RA)	111 (23.5%)
Crohn's Disease (CD)	12 (2.5%)
Ulcerative Colitis (UC)	11 (2.3%)

FIGURE 1: CLASS-LEVEL FIRST FILL DISTRIBUTION OF TIMS

Among TNF-a class, adalimumab biosimilars accounted for the majority of first fills

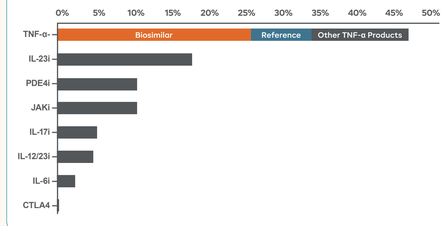


FIGURE 2: ADALIMUMAB REFERENCE VS. BIOSIMILAR FIRST FILL RATE PER 1,000 MEMBERS

Biosimilar first fills reached 100% by year-end, after the reference product was removed from the formulary

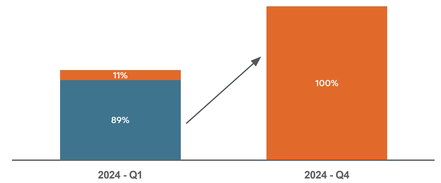


FIGURE 3: PATIENT JOURNEY AND SWITCHING PATHWAYS

Among 472 patients, 13% (n=61) switched therapy after their first fill, most commonly from adalimumab reference to a biosimilar

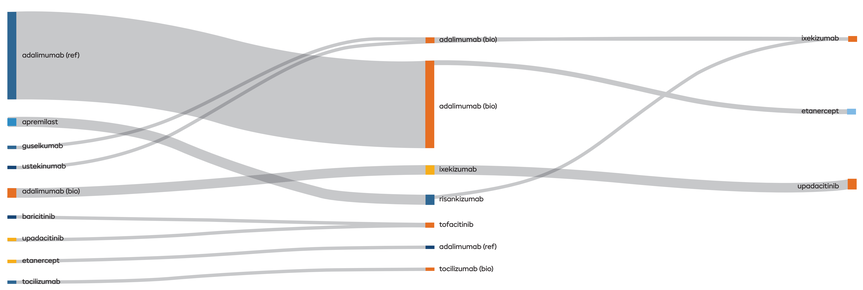


FIGURE 4: PROPORTION OF PATIENTS REMAINING ON THERAPY FOLLOWING TREATMENT INITIATION

63%
Persistent to TIMs after the first fill

FIGURE 5: DURATION ON THERAPY BY TIM CLASS

IL-23i agents demonstrated the greatest sustained persistence over the observation period; however, differences between classes were not statistically significant (log-rank p = 0.704)

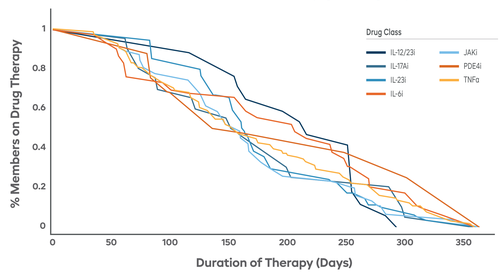
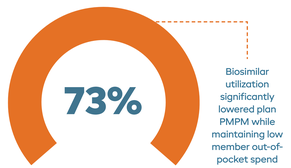
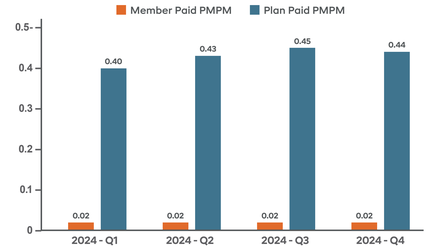


FIGURE 6: COST SAVINGS DRIVEN BY ADALIMUMAB BIOSIMILARS



Plan Paid PMPM Reduction
(adalimumab, 2024)

FIGURE 7: QUARTERLY PMPM TRENDS FOR TIMS: PLAN VS. MEMBER COSTS



LIMITATIONS

- This analysis was limited to Lumicera Specialty Pharmacy, which may restrict the generalizability of findings to broader populations or other dispensing settings.
- Response rate and patient disease control status were not available, limiting the ability to assess treatment effectiveness or patient engagement.
- The study population consisted exclusively of commercially insured members; results may not be generalizable to Medicaid, Medicare, or uninsured populations, which may differ in demographic and clinical characteristics.

CONCLUSIONS

- Formulary changes and biosimilar adoption substantially reduced total drug spend while maintaining access to TIM therapies.
- By Q4 2024, biosimilars accounted for 89% of adalimumab utilization, contributing meaningfully to affordability and plan level cost savings.
- Treatment persistence remained strong, with 63% of patients continuing therapy at 12 months.
- Further research is needed to identify clinical and non-clinical factors influencing persistence, switching behavior, and long term cost effectiveness.
- Real-world insights into persistence and adherence can help guide formulary strategy and support improved patient outcomes.

DISCLOSURE

This research was conducted by Navitus Health Solutions, Madison, WI, without external funding.

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