

CHANGES IN DISEASE-MODIFYING THERAPIES IN PATIENTS WITH RELAPSING MULTIPLE SCLEROSIS

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BACKGROUND

- Disease-modifying therapies (DMTs), used to treat relapsing multiple sclerosis (RMS), vary in mechanism of action, administration route, and efficacy level.¹
- The Consortium of Multiple Sclerosis Centers Practice Guidelines emphasize that DMT treatment selection and modification should be individualized, encouraging decisions based on clinical and patient factors as well as professional judgement.¹

OBJECTIVE

Evaluate the long-term rate and reasons for DMT switching for patients using an integrated health-system specialty pharmacy

METHODS

DESIGN	Single-center, retrospective review
INCLUSION	<ul style="list-style-type: none"> Diagnosis of RMS ≥ 3 fills of DMT at Vanderbilt Specialty Pharmacy (VSP) in the 6-month index period (May - October 2017) DMT prescribed by Vanderbilt MS clinic provider
DATA SOURCES	<ul style="list-style-type: none"> Electronic health record Specialty pharmacy patient management system Pharmacy claims
ANALYSIS	Descriptive statistics used to summarize sample characteristics and outcomes

RESULTS

TABLE 1. PATIENT DEMOGRAPHICS (N=540)

Characteristic	n (%)
Age, years (median, IQR)	49 (41-57)
Gender, female	402 (74)
Race, white	453 (84)
Insurance type	
Commercial	331 (61)
Non-commercial	209 (39)
DMT naïve	41 (8)
Relapse 1 year prior to index date	23 (4)
Index DMT	
Injectable, n=273	
glatiramer acetate (branded version)	115 (21)
subcutaneous interferon beta-1a	62 (12)
intramuscular interferon beta-1a	48 (9)
subcutaneous interferon beta-1b (Bayer, 1993)	24 (4)
peginterferon beta-1a	18 (3)
subcutaneous interferon beta-1b (Novartis, 1993)	4 (<1)
glatiramer acetate (branded generic version)	2 (<1)
Oral, n=267	
dimethyl fumarate (branded version)	107 (20)
fingolimod	96 (18)
teriflunomide	64 (12)

RESULTS

FIGURE 1. DMT SWITCHES (N=136)

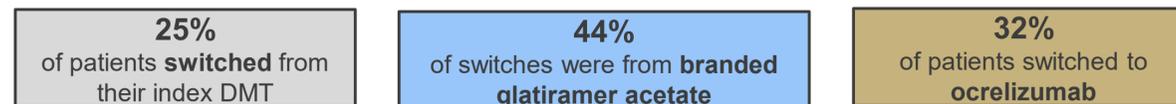
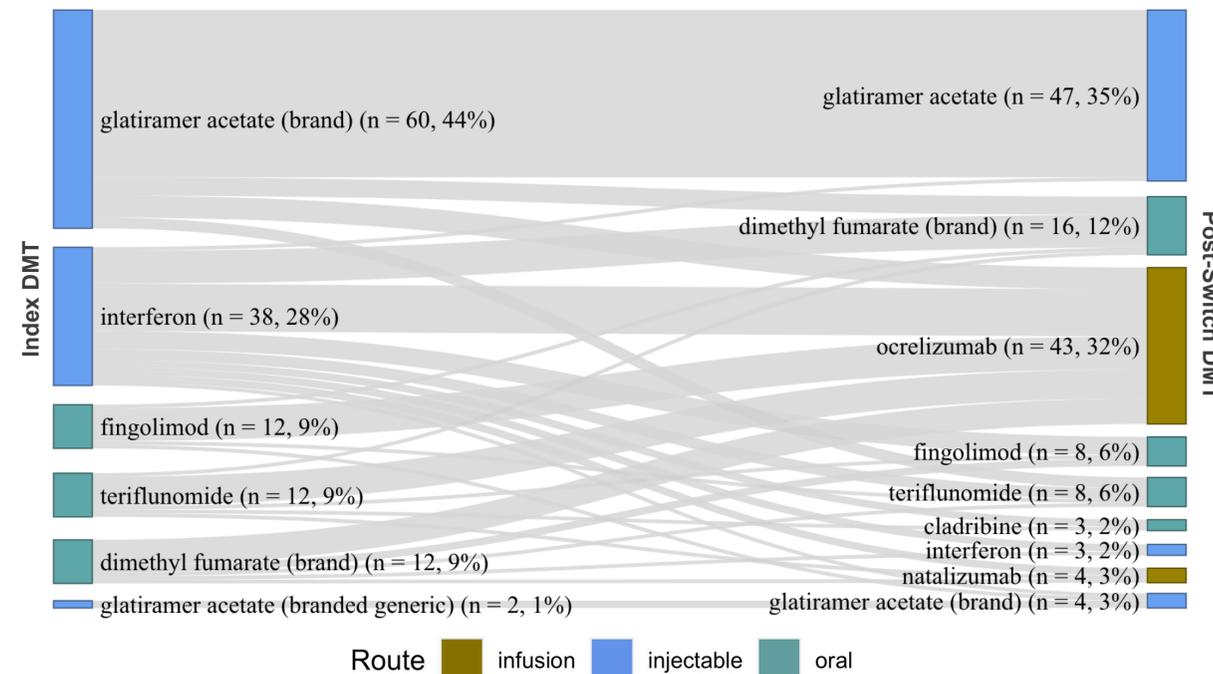
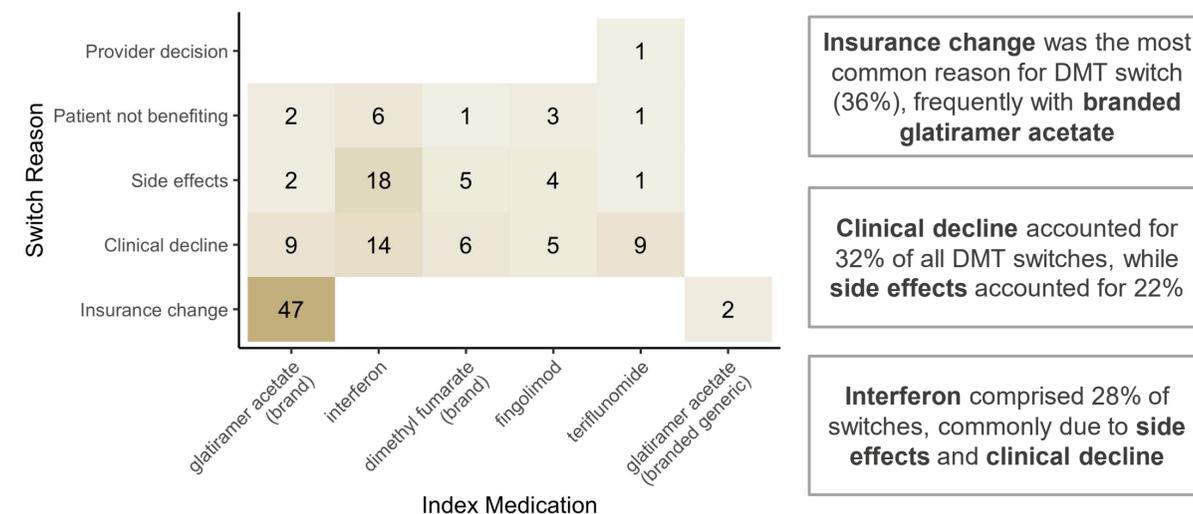


FIGURE 3. DMT SWITCH REASONS

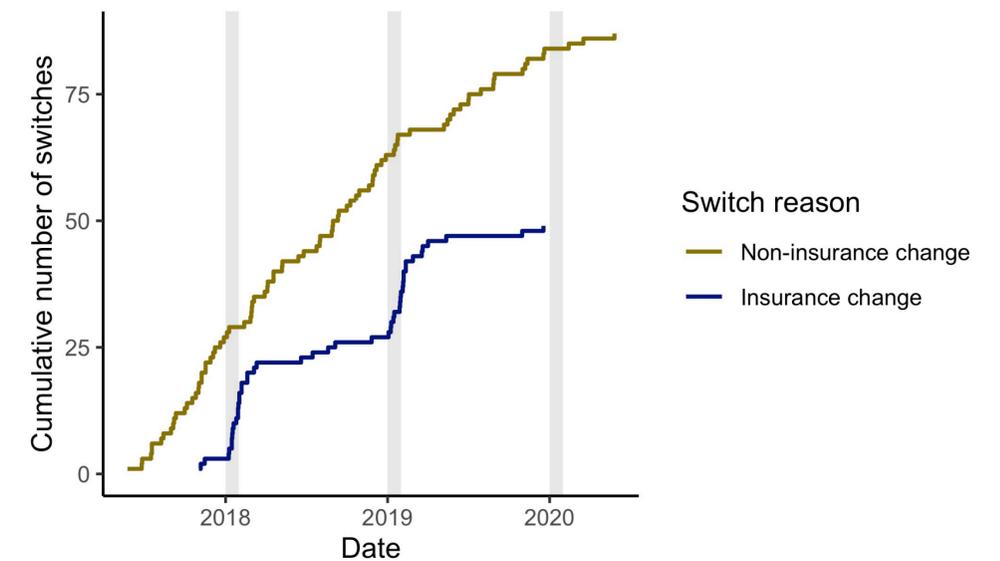


Insurance change was the most common reason for DMT switch (36%), frequently with **branded glatiramer acetate**

Clinical decline accounted for 32% of all DMT switches, while **side effects** accounted for 22%

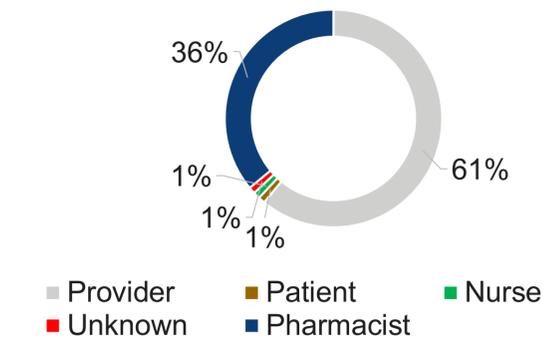
Interferon comprised 28% of switches, commonly due to **side effects** and **clinical decline**

FIGURE 2. TIME TO FIRST DMT SWITCH



- DMT switches due to insurance change often occurred at the beginning of each calendar year as opposed to changes due to all other reasons, likely a result of insurance formulary changes
- There was a steady, cumulative increase in DMT switches due to reasons other than insurance change throughout the study period

FIGURE 4. INDIVIDUAL RESPONSIBLE FOR INITIATING DMT SWITCH (N=136)



- Pharmacists** identified the need for and initiated 36% of switches
- Pharmacists' role in switching included:
 - Recommending a new DMT
 - Providing new medication counseling
 - Recommending and coordinating pre-therapy labs and tests
 - Assisting with medication access
 - Coordinating follow-up care

CONCLUSIONS

- DMT switches occur frequently in patients with RMS, most often due to insurance formulary change, clinical decline, or side effects
- Patients with RMS commonly switched to higher efficacy monoclonal antibody infusion medications in instances of clinical decline
- Integrated specialty pharmacists play a key role in identifying the need for a DMT change and coordinating care during therapy transitions