PERSISTENCE TO DISEASE-MODIFYING THERAPY IN PATIENTS WITH RELAPSING MULTIPLE SCLEROSIS

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BACKGROUND

• Patients with relapsing multiple sclerosis (RMS) are maintained on disease-modifying therapy (DMT) to help slow disease progression, reduce the number of disease relapses, and limit new disease activity.1
• Reported persistence rates to DMTs are concerning low.2,3

OBJECTIVES

• Evaluate DMT persistence over 3 years
• Assess rate and reasons for DMT discontinuation

METHODS

Design & Setting
• ≥ 3 fills of DMT (index) in May – October 2017
• Relapsing form of MS (ICD10 of G35)
• DMT prescribed by MS Clinic provider

Sample
• ≥ 3 fills of DMT (index) in May – October 2017
• Relapsing form of MS (ICD10 of G35)
• DMT prescribed by MS Clinic provider

Outcomes
• Persistence to index DMT over 3 years
• Reason for first DMT discontinuation
• Pharmacist role in first DMT discontinuation

RESULTS

TABLE 1. BASELINE CHARACTERISTICS (N=540)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years (median, IQR)</td>
<td>49 (41-57)</td>
</tr>
<tr>
<td>Gender, female</td>
<td>402 (74)</td>
</tr>
<tr>
<td>Race, white</td>
<td>453 (84)</td>
</tr>
<tr>
<td>Insurance type, commercial</td>
<td>331 (61)</td>
</tr>
<tr>
<td>Index DMT</td>
<td></td>
</tr>
<tr>
<td>Interferon</td>
<td>156 (29)</td>
</tr>
<tr>
<td>Glatiramer acetate</td>
<td>115 (21)</td>
</tr>
<tr>
<td>Dimethyl fumarate</td>
<td>107 (20)</td>
</tr>
<tr>
<td>Fingolimod</td>
<td>96 (18)</td>
</tr>
<tr>
<td>Teriflunomide</td>
<td>64 (12)</td>
</tr>
</tbody>
</table>

RESULTS

• 193 patients (36%) remained on index DMT
• Of patients that were non-persistent, most switched to an alternate DMT (25%)
17% transferred care, likely due to payer requirements
Discontinuations (17%) occurred steadily over time

FIGURE 1. PROBABILITY OF DMT PERSISTENCE

81% at 1 year (95% CI 0.77-0.84)
51% at 3 years (95% CI 0.47-0.56)

Median time on DMT: 642 days (IQR 317-1096)

FIGURE 2. TIME TO FIRST EVENT ON DMT

Switch (25%, n=136)
Transferred care (17%, n=92)
Discontinue (17%, n=91)
Lost to follow-up (5%, n=21)
Deceased (2%, n=7)

Median time on DMT: 642 days (IQR 317-1096)

FIGURE 3. DMT DISCONTINUATION REASONS

Dimethyl fumarate accounted for the most discontinuations (33%)
Side effects were the most common discontinuation reason (32%), particularly for dimethyl fumarate
13% of patients discontinued due to stable disease, often while on interferon

SPECIALTY PHARMACIST INVOLVEMENT IN DMT DISCONTINUATIONS

Identify the need for and initiate discontinuation due to lymphopenia, liver enzyme elevation, & pregnancy
Communicate with the patient and prescriber
Coordinate follow-up care, including additional lab monitoring
Recommend new DMT option

CONCLUSIONS

• Long-term persistence to one specific DMT over 3 years is low
• Patients with RMS commonly discontinue their DMT due to side effects or stable disease