Characteristics of Health Insurance Coverage in Patients with Active and Nonactive Progressive Multiple Sclerosis in the United States

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BACKGROUND

- Patients with MS receive prescription drug benefits from a variety of insurance payers in the US, including both private and public insurers[1]
- In the US, patients <65 years with MS can qualify for Medicare if they have disabilities and meet the Medicare criteria, demonstrating the disability and potential burden of this disease[2]
- Variability in insurance coverage results in differences in coverage of medication, co-payments, and reimbursement costs among patients with MS[3]
- Additionally, variations in drug coverage may lead to high out-of-pocket (OOP) costs for DMTs, resulting in lack of adherence and thereby a reduction in DMT effectiveness among patients with MS[4,5]
  - Specifically, patients covered by Medicare often have significant OOP costs for MS medications[5]
  - Currently, there is a high unmet need for safe and effective DMTs in PMS, as there is only one approved product for PPMS and none approved for nonactive SPMS in the US; in addition, there is limited benefit in terms of disease modification in nonactive PPMS/ SPMS

Understanding the payer mix for patients with PMS could provide valuable insight regarding differences in overall reimbursement / OOP costs and disability status in this population

OBJECTIVE AND METHODS

Objective: To characterize the health insurance coverage in patients with active/nonactive PMS in the US to determine the payer mix in this population

Study design

- The annual cross-sectional survey from the Adelphi Disease Specific Programme conducted independently by Adelphi Real World (Bollington, UK) from 2016 to 2021 was used to collect data on adult patients with active or nonactive PMS
- Physicians (i.e. neurologists) who were qualified to practice medicine, responsible for treatment decisions for patients with MS, and made treatment decisions for ≥16 patients with MS in a typical month, were invited to participate in the cross-sectional survey
  - Participating physicians completed a physician-reported questionnaire for their next 10–15 patients with MS who consulted them
  - Information was obtained through a review of patients' medical records; there was no time limit on how far back the physician could look
- Adult patients (aged ≥18 years) with active or nonactive PMS in the US were identified
  - Active and nonactive PPMS were categories within the current diagnosis that the physician reported
  - Active and nonactive SPMS were defined by physician-reported current diagnosis of SPMS, and the presence or absence of relapse in the past year, respectively; patients with unknown relapse status in the past year were excluded
  - Patients could not be participating in any clinical trials at the time of the survey
- Type of current health insurance and patient cost sharing were described and characterized by patient demographics, diagnosis, and current DMT

RESULTS

Patient characteristics

- Insurance data were provided for a total of 2067 patients with active and nonactive PMS; characteristics for these patients are shown in **Table 1**
  - Mean age (SD) was 50.7 (10.8) years
  - 56.7% were female

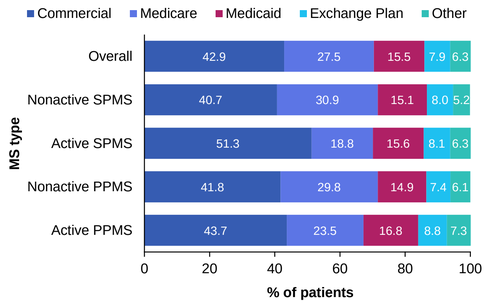
Table 1. Patient Characteristics

Characteristic	N=2067
Age, years	
Mean (SD)	50.7 (10.8)
Female, %	56.7
White, %	75.8
BMI, kg/m²	
Mean (SD)	26.5 (4.4)
EDSS ≤5, %	69.5
Working full time, %	20.6
MS subtype, %	
Active PPMS	25.9
Nonactive PPMS	50.7
Active SPMS	7.7
Nonactive SPMS	15.7

Types of insurance coverage by MS type

- Of the health insurances, commercial coverage was the highest for all PMS subtypes (41–51%) (**Figure 1**)
- Medicare covered ~30% of patients with nonactive PMS, which is slightly numerically higher than the 19–24% of patients with active PMS (**Figure 1**)
- 15–17% of patients were covered by Medicaid across PMS subtypes (**Figure 1**)

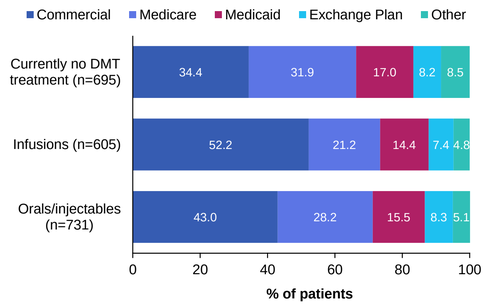
Figure 1. Insurance Coverage by MS Type



Types of insurance coverage by current DMT

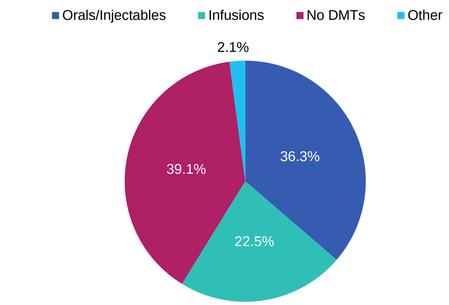
- Of the health insurances, commercial coverage was the highest across all types of current DMT (43.0% orals/injectables, 52.2% infusions, 34.4% no DMT) (**Figure 2A**)
- Of the patients on Medicare (n=568), 36.3% were on orals/ injectables, 22.5% were on infusions, and 39.1% were on no DMT **(Figure 2B)**

Figure 2A. Insurance Coverage by Type of DMT*



*36 patients included in the total were classified as receiving DMTs via 'other' mode of administration.

Figure 2B. Medicare Coverage by Type of DMT



Medicare coverage by age and EDSS score

- Younger Medicare enrollees (<65 years old) accounted for 65.5% of the Medicare population (**Figure 3A**)
- Almost half (48.5%) of younger Medicare enrollees had an Expanded Disability Status Scale (EDSS) score ≥5.5, which was similar to Medicare enrollees aged ≥65 years (50.0%) (**Figure 3B**)

Figure 3A. Medicare Coverage by Age

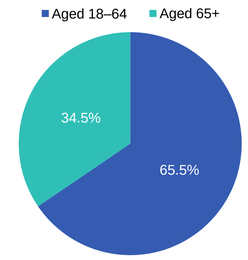
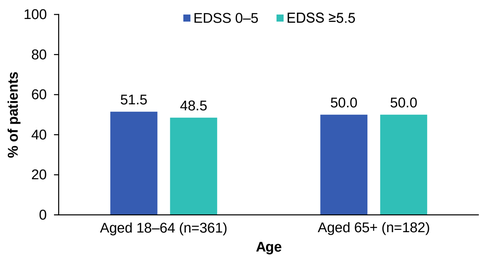


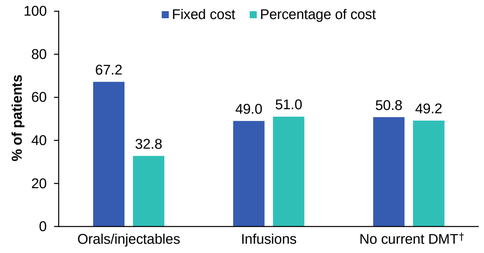
Figure 3B. EDSS Score in the Medicare Population



Prescription costs

- For patient cost sharing, 67.2% of patients on orals/injectables, 49.0% on infusions, and 50.8% without a DMT paid fixed amounts for their prescriptions (**Figure 4**)
- Mean (SD) monthly fixed cost was $52 ($52) for orals/ injectables and $61 ($73) for infusions; the percentage of cost was 20% (12%) for orals/injectables and 9% (8%) for infusions

Figure 4. Prescription Costs by DMT Type*



*3 patients included in the total were classified as receiving DMTs via 'other' mode of administration. †Prescription costs are for other prescribed medications.

LIMITATIONS

- Longitudinal data were not available to determine the impact of PMS over time
- No comparisons were made as this was a descriptive study
- Individuals not seen by physicians or not properly diagnosed with PMS were not included
- Patients with PPMS were oversampled to further study this population
- Active and nonactive status of SPMS were determined using relapses in the prior year
- Limited insurance claim denials were reported (3%), which may be due to the study design

CONCLUSIONS

- **In this study, commercial coverage was the highest across all PMS subtypes and in those with/without DMTs (especially infusions)**
- **Medicare was also an important payer, especially for nonactive and younger PMS patients**
  - **A high percentage of younger Medicare enrollees with PMS (<65 years) are disabled and can no longer be in the workforce, whereas they otherwise would have commercial coverage**
  - **These results demonstrate the high burden of disease in this population**
  - **There is a high unmet need for therapies that can slow, stabilize, or improve disability progression in these nonactive and younger PMS populations to potentially enable them to remain in the workforce**
- **Variability between payers, including differences in OOP expenses for patients, may contribute to what therapies are preferentially used for MS**
- **More than one-third of patients did not receive DMTs at all, thus highlighting the unmet need for better therapies in this population**

This study characterizes the payer mix and highlights the high disability in the younger and nonactive PMS population in the US, demonstrating the high unmet need for new treatments for these patients

ACKNOWLEDGMENTS AND DISCLOSURES

This study is sponsored and funded by Atara Biotherapeutics

Crystal Watson, **Arie Barlev**, **Sasha Bogdanovich**, and **Kiren Kresa-Reahl** are employees and shareholders of Atara Biotherapeutics. **Eddie Jones** is an employee of Adelphi Real World. **Dhanalakshmi Thirumalai** and **Jiahe Chen** were employees of Atara at the time of study

Medical writing assistance was provided by Tricia Brown from AMICULUM Ltd, funded by Atara Biotherapeutics

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ABBREVIATIONS

BMI = body mass index; DMT = disease-modifying treatment; EDSS = Expanded Disability Status Scale; MS = multiple sclerosis; OOP = out-of-pocket; PMS = progressive multiple sclerosis; PPMS = primary progressive MS; SD = standard deviation; SPMS = secondary progressive MS.