

A Retrospective Analysis of Real-World Medical Data to Evaluate Differences in Utilization and Expenditure of Natalizumab within Various Sites of Care

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BACKGROUND

- Multiple Sclerosis (MS) is a chronic, disabling, neurological disease that affects the central nervous system (CNS). 1,2
- Though there is no cure for MS, effective treatments exist for the relapsingremitting form of the disease (RRMS) that may modify the disease course, treat exacerbations, manage symptoms, and improve function and quality of life.³
- Although the clinical management of MS has improved drastically following the availability of disease modifying drugs (DMDs), clinical and financial challenges remain for both patients and healthcare insurance providers (payers).
- The major challenge from the payer perspective is related to cost. DMDs used to treat MS cost tens of thousands of dollars per year for each patient and payers struggle to implement appropriate management strategies that can contain costs without negatively impacting patient outcomes.
- For certain DMDs, the cost can be variable based on the site of administration, however, the extent of the price disparity, especially within different geographies, has not been clearly identified.

OBJECTIVE

• To analyze the impact that site of care (SOC) administration has on natalizumab utilization, adherence, and cost within various geographic regions.

METHODS

- The data used for this retrospective analysis was real-world medical claims data obtained from four regional health plans from different geographies (northeast, southeast, midwest, and west coast).
- Inclusion criteria:
 - Patients identified as having MS via ICD-9 340
 - Age ≥ 18 years
 - Minimum of 2 paid claims for natalizumab (Tysabri) infusion using J2323 - Continuously eligible from January 1, 2013 through December 31, 2013
- The following medical claims data were collected for natalizumab claims:
- Medical diagnosis, SOC location, and utilization data, which included number of claims, quantity, allowed amount, and paid amount.
- Allowed amount is defined as the maximum reimbursement for a specific service or procedure that includes both the amount paid by an insurer and patient out-of-pocket costs.
- Natalizumab utilization data was stratified according to both SOC location and geography.
- For each patient, proportion of days covered (PDC) was calculated to assess for differences in adherence between various SOCs and geographies.
- Results were analyzed using descriptive statistics. SAS programming was used to assess statistical differences in adherence, utilization, and cost based on SOC.

RESULTS

Table 1. Medical Claims and Cost Breakdown by SOC

SOC	% of Allowed Amount	Number of Claims	Unique Providers	Relative Allowed per Claim*
Physician Office or Freestanding Infusion Center	41%	2,138	150	1
Hospital Outpatient Facility	52%	1,818	102	1.49
Home Infusion/Specialty Pharmacy (HI/SPP)	7%	391	13	0.93
Total	100%	4,347	265	1.20

*Relative allowed amount per claim using physician office utilization as comparative index point There is no significant difference in utilization between the three groups (claims per member p = 0.3779) Allowed amount per claim differs significantly between the three groups (p < 0.0001)

Table 2. Cost Breakdown by Region and SOC

Region	Site of Care (SOC)	% of Allowed Amount	Number of Claims	Relative Allowed Amount per Claim*
Northeast	HI/SPP	5.72%	188	0.95
	Hospital OP	56.66%	1,073	1.65
	Physician	37.62%	1,176	1
Southeast	HI/SPP	3.23%	42	0.92
	Hospital OP	43.95%	457	1.15
	Physician	52.82%	629	1
Midwest	HI/SPP	20.97%	157	0.95
	Hospital OP	45.35%	226	1.43
	Physician	33.68%	240	1
West Coast	HI/SPP	1.82%	4	0.86
	Hospital OP	48.85%	62	1.49
	Physician	49.33%	93	1

*Relative allowed amount per claim using physician office utilization as comparative index point

Figure 1. Total Spend by Region and SOC

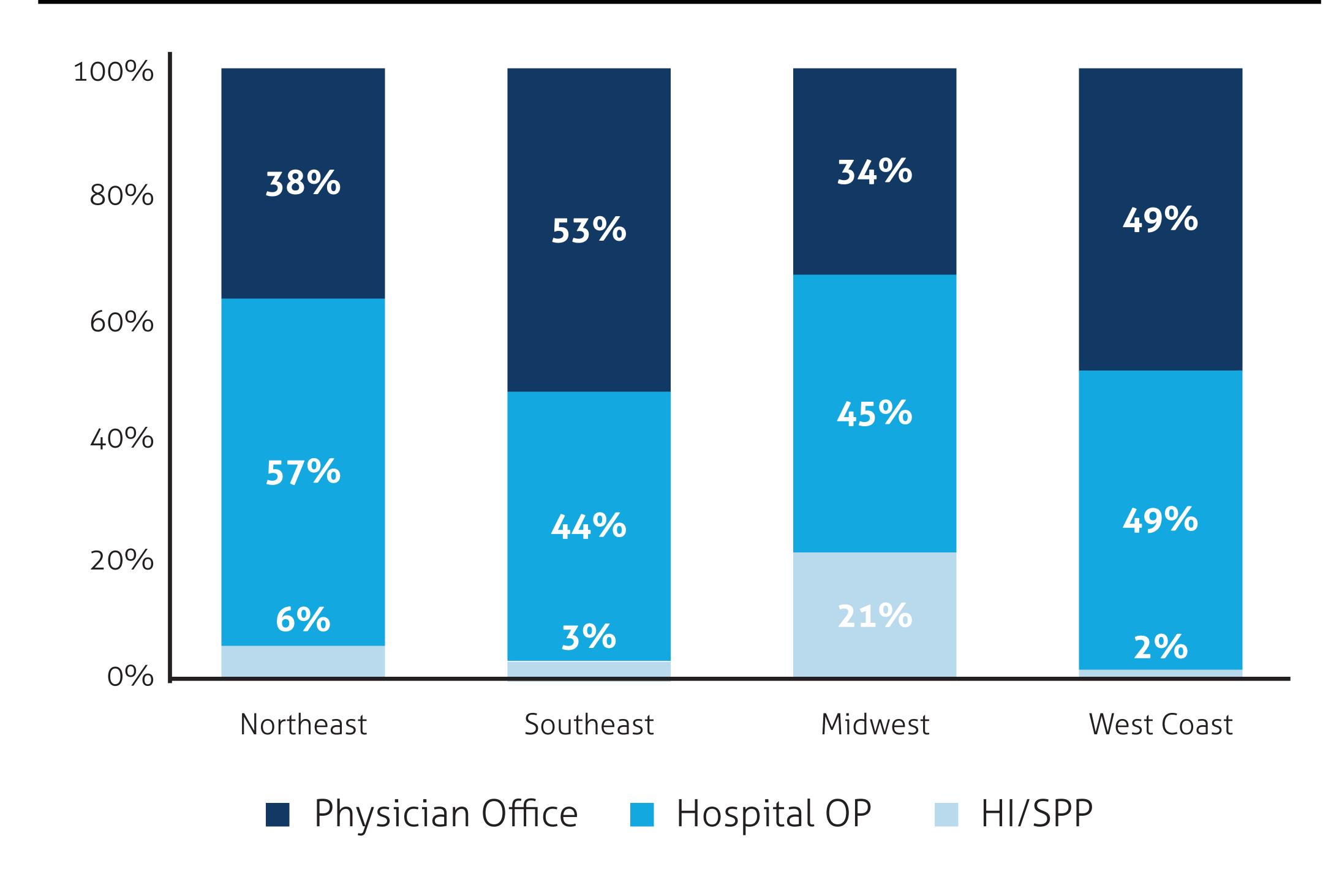
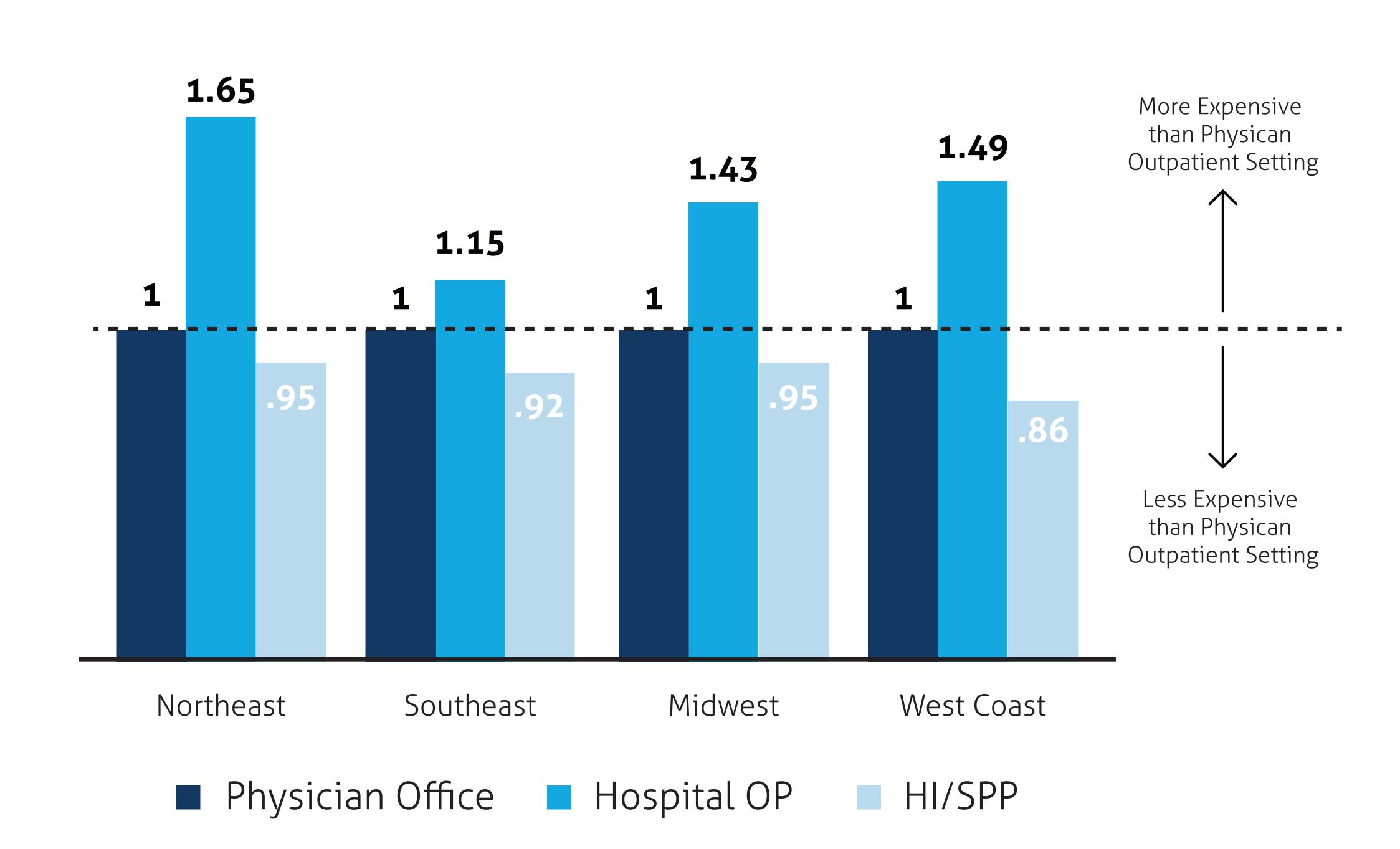


Figure 2. Relative Allowed Amount per Claim by Region and SOC



CONCLUSION

office administration for natalizumab therapy across various US geographies.

• On average, hospital outpatient cost per claim is 49% higher than physician

• Choice of SOC can be associated with a high degree of unnecessary costs.

• Identifying specific regions with a high percentage of HOP utilization is one

opportunity for managed care organizations to reduce unnecessary utilization

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Additionally, SOC utilization and associated costs may differ by region.

and contain escalating SOC costs.

DISCUSSION

- A total of 582 unique patients were administered natalizumab representing 4,347 total claims.
- The average allowed amount per claim in home infusion/specialty pharmacy was 7% lower than physician office claims.
- The average allowed amount per claim in a HOP was 49% higher than physician office claims.
- The percent of claims administered in hospital outpatient facilities were 44% (northeast), 40% (southeast), 36% (midwest), and 39% (west coast).
- Average allowed amount per claim in hospital outpatient facilities was 65%, 15%, 43%, and 49% higher compared to physician offices in each region, respectively.
- The percent of claims by SOC was very similar across all regions, with one exception: the midwest had a higher proportion of HI/SP utilization – 25% compared to 3-8% in the other regions.
- There were no large differences in adherence observed between different SOC, except in the southeast, where adherence in the hospital outpatient facilities was 82% compared to over 92% in patients administered natalizumab through alternative SOCs.

LIMITATIONS

- The accuracy of this analysis relies on the accuracy of the medical claims submitted by the physicians and paid for by the health plans.
- Patient history and progress notes were not available to identify reason(s) for administration of natalizumab therapy at a specific SOC.
- Economic impact associated with various SOCs was only evaluated for one medical benefit injectable drug.

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Session P03, #201.

• BCB, TPL, PP: employees and shareholders of Biogen Idec. This study was funded by Biogen Idec.

DISCLOSURES