Real-World Costs of Administering Disease-Modifying Drug Infusions Among Patients with Multiple Sclerosis: A US Retrospective Administrative Claims Database Analysis



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Non-DMD costs on each day that an infusion was given were:\$936 for alemtuzumab

- \$830 for ocrelizumab
- \$401 for natalizumab



Real-world costs of administering DMD infusions among patients with MS should be considered



There are challenges in setting rules for specificity and sensitivity (e.g., time frame, code category, etc.) for capturing appropriate costs

EINTRODUCTION

- In addition to the cost of the medications, initiation of DMDs in patients with MS may incur administration and monitoring costs that include laboratory tests, procedures, and visits¹
- Little is known about the resource use and costs associated with administration and monitoring of infusion DMDs in US patientswith MS



OBJECTIVE

 To document, categorize, and quantify real-world costs associated with administering MS DMD infusions (natalizumab, alemtuzumab, and ocrelizumab) using medical billing codes occurring on the same day as a DMD infusion



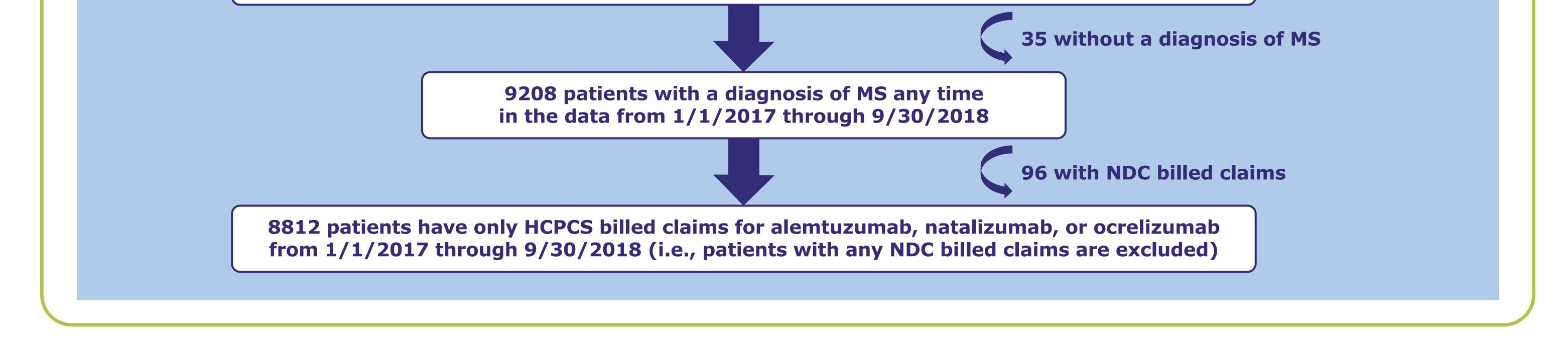


METHODS

- Patients with a diagnosis of MS and ≥1 HCPCS billed medical claim for natalizumab, alemtuzumab, or ocrelizumab were identified from the IQVIA[™] RWD Adjudicated Claims–US database from 1/1/2017–9/30/2018
- All medical billing codes (i.e., HCPCS, CPT and Revenue) occurring on the same day as a HCPCS-coded claim were included
- The primary outcome was the average non-DMD cost per infusion-day (i.e., per dose) by category and DMD

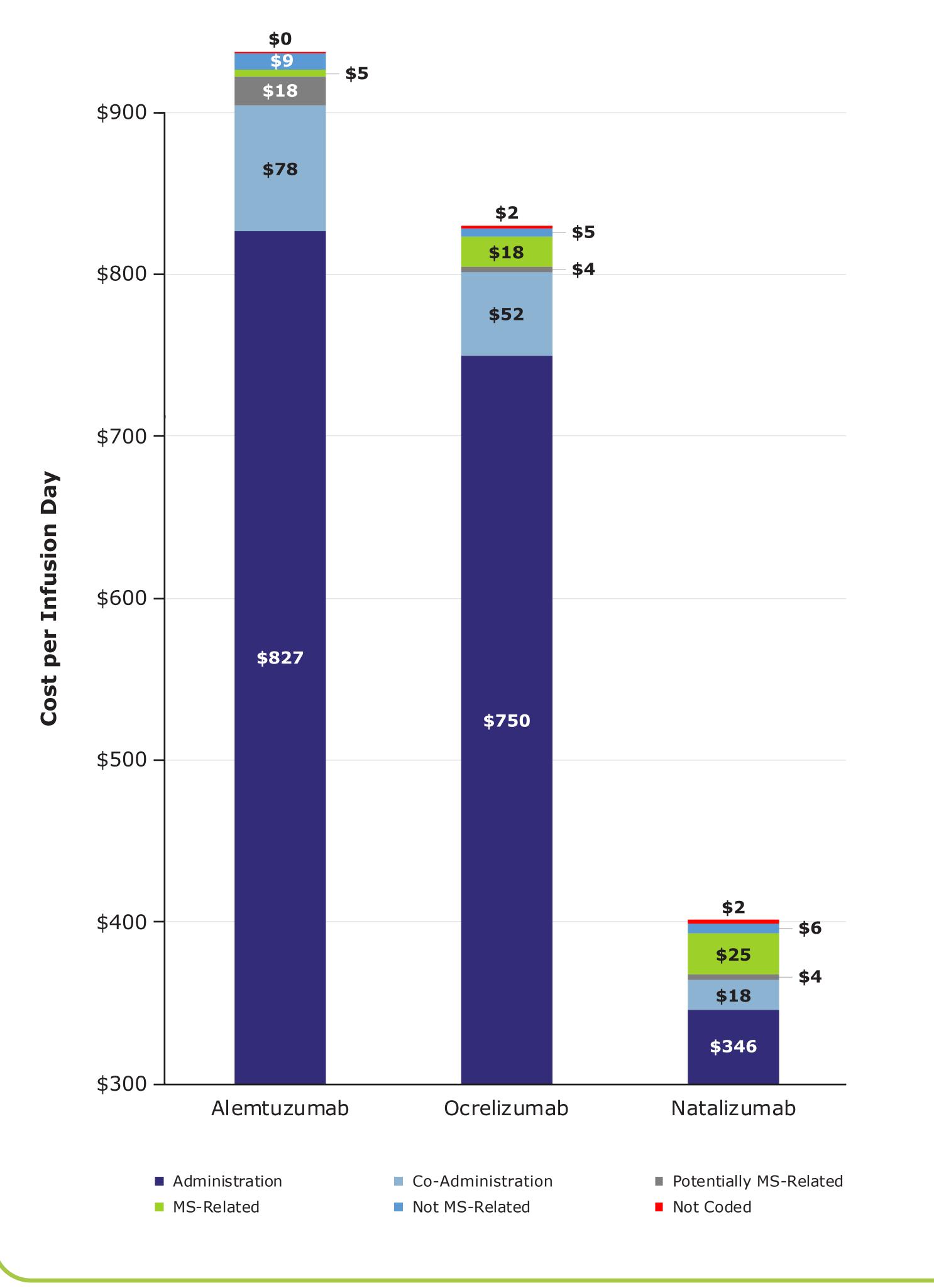
Figure 1. Patient Selection

9243 patients with any NDC or HCPCS billed pharmacy or medical claim for alemtuzumab, natalizumab, or ocrelizumab from 1/1/2017 through 9/30/2018



RESULTS

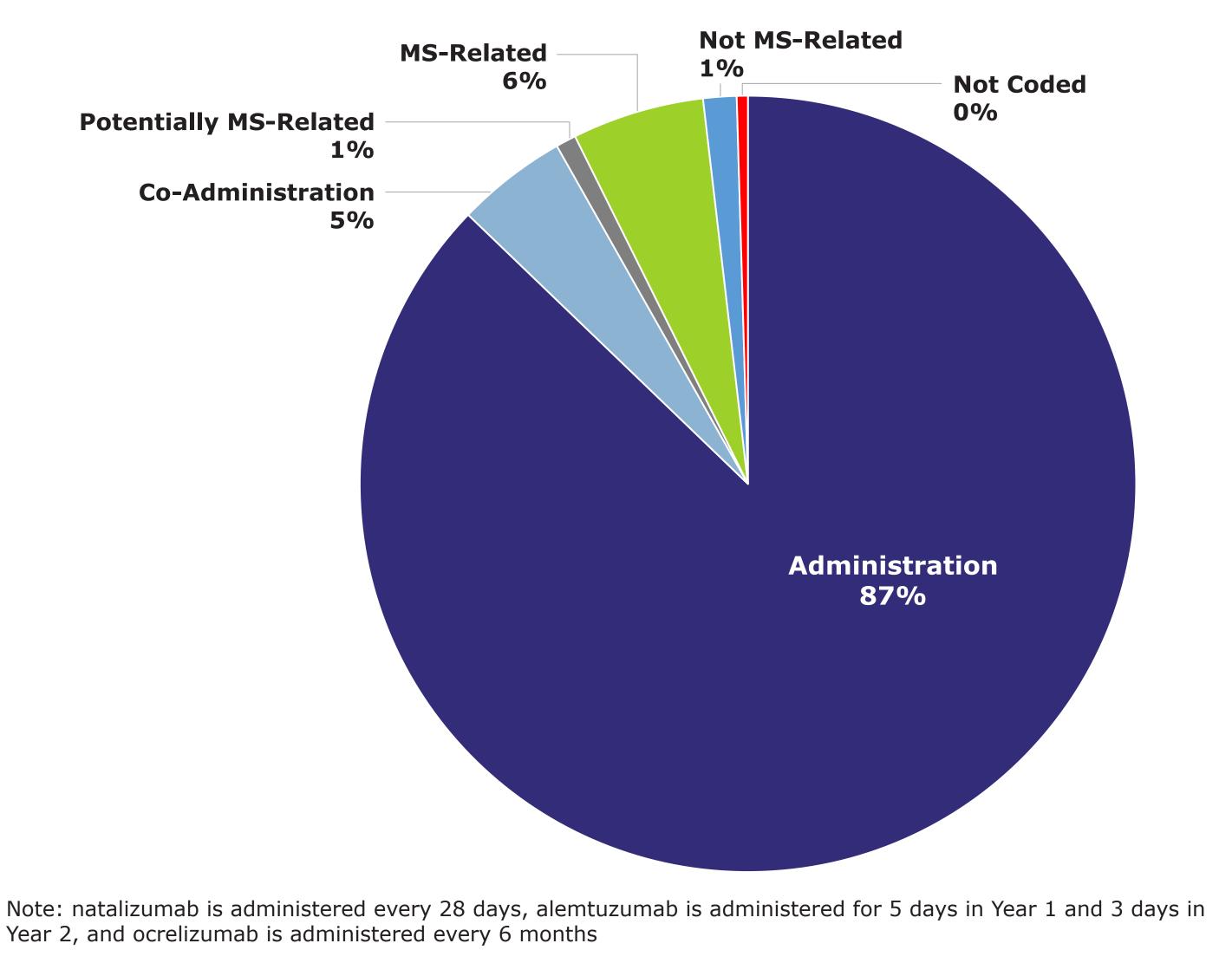
Figure 2. Cost per Infusion Day by Cost Category



- 8812 patients meeting eligibility criteria had 63,389 infusion days
- Mean total non-DMD costs for all medical codes billed on infusion-day were \$936 for alemtuzumab, \$830 for ocrelizumab, and \$401 for natalizumab
- Most non-DMD costs were categorized as administration costs; costs for administration per infusion-day were \$827 for alemtuzumab, \$750 for ocrelizumab, and \$346 for natalizumab
- The next most costly categories were co-administration costs (e.g., pre-treatment steroid, antihistamine, pregnancy test, lab tests, etc.; alemtuzumab \$78, ocrelizumab \$52, and natalizumab \$18 per infusion-day), MS-related costs (alemtuzumab \$5, ocrelizumab \$18, and natalizumab \$25 per infusion-day), potentially MS-related costs (alemtuzumab \$18, ocrelizumab \$4, and natalizumab \$4 per infusion-day), and Net MS related costs (alemtuzumab \$4 per infusion-day),

and **Not MS-related costs** (alemtuzumab \$9, ocrelizumab \$5, and natalizumab \$6 per infusion-day)

Figure 3. Cost Components of Overall Day of Infusion



Abbreviations: CPT, Current Procedural Terminology; DMD, disease-modifying drug; HCPCS, Healthcare Common Procedure Coding System; MS, multiple sclerosis; NDC, national drug code

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Reference: Lage MJ, Wu Y. Real-World Monitoring Costs Associated With Initiation of Disease-Modifying Therapy Among Patients With Multiple Sclerosis. Poster presented at: The American Academy of Neurology (AAN) 2017 Annual Meeting; Boston, Massachusetts, US; April 22–28, 2017.

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