

Trends in the use of Highly Effective Disease Modifying Treatments in Multiple Sclerosis over 12 years across 10 Sites

Marisa McGinley¹, Nicolas Thompson², Malory Weber¹, Robert Bermel¹, Daniel Ontaneda¹
¹Mellen Center, ²Quantitative Health Sciences, Cleveland Clinic

Objective: To determine changes in prescribing practices of highly effective treatments (HET) in multiple sclerosis (MS) over time across multiple sites.

Background: The treatment landscape for MS has dramatically changed. There is currently no universally accepted treatment paradigm. There are two ongoing PCORI funded trials (DELIVER-MS and TREAT-MS) that aim to directly compare initial use of low/moderate efficacy treatments (LMT) vs. HET approaches in early relapsing remitting MS (RRMS). The optimal treatment strategy is not known, which may result in significant practice variability.

Design/Methods: : Demographics, MS disease history, and iPad® based neuroperformance tests were collected from 10 academic MS centers in the US and Europe utilizing the MSPATHS database. The proportion of HET and LMT was assessed yearly since 1993 through 2018 in the entire RRMS population and treatment naïve population. HET was classified as use of natalizumab, alemtuzumab, ocrelizumab, or rituximab. LMT was classified as use of any other FDA approved therapy for RRMS.

Results: 5520 RRMS patients on treatment were identified in MS PATHS (age 46± 11.5 years, female 75%, white 63.5%, education >12 years 72.7%, disease duration 11±8 years, PDDS 0, full time employment 54%, private insurance 58.3%, treatment naïve 37.6%). In the entire RRMS population the first utilization of HET was in 2006 at 27.3% and this has increased to 43.8% in 2018. In a treatment naïve population (n=2060) the first utilization of HET was in 2009 at 9.5% and has increased to 32.3% in 2018. Significant variability was also observed in the proportion of patients treated with HET across different sites.

Conclusions: Although the utilization of HET has increased in MS it remains the minority of DMTs used and currently only accounts for about a third of first line treatments used. Treatment strategies continue to significantly vary and more evidence is needed to inform treatment approaches.