in health care consumed for the treatment of multiple sclerosis (MS) in patients enrolled in commercial (commercial) and publicly (Medicaid) funded health insurance programs. METHODS: In a retrospective analysis, integrated medical and pharmacy claims data were analyzed to select patients with a diagnosis of MS (ICD-9 code 340) during 2012 calendar year. The presence of comorbidities was also determined by the presence of ICD-9 codes present on medical claims. Prescription drug use was evaluated by pharmacy claims and drug-specific billing codes. RESULTS: 19,984 patients with MS were identified, 18,269 from commercial payers and 1715 from Medicaid. Patients in the Medicaid group were younger (44 vs 48.8 years) and female (81.5% vs. 76.8%) compared to Commercial group, respectively. Although total annual costs related to the care of MS for the groups reflected a modest difference ($31,107 commercial, $33,344 Medicaid), costs associated with specific categories varied greatly. Pharmacy costs were considerably less in the Medicaid group; however, inpatient and emergency room costs were as much as 5 times higher. The lower pharmacy costs in the Medicaid group are related to lower use of disease modifying therapies (DMTs). Overall use of DMTs in the Medicaid group was seen in 32.5% of patients; while in the commercial patient group was 52.1%. Multivariate regression will be performed to examine the differences in cost and utilization adjusting for differences in baseline characteristics. CONCLUSIONS: The results of this study show that patients in Medicaid have substantially lower costs than those who were not on DMTs. A retrospective analysis of integrated medical and pharmacy claims data was analyzed inpatients with a diagnosis of MS (ICD-9 of 340.0) during 2012. There were 2 cohorts, those treated with DMT and those not treated, (Non-DMT) for the entire 12 months by the presence or absence of relevant NDC and HCPCS codes. RESULTS: 10,876 patients comprised the DMT cohort compared to 25,431 in the Non-DMT cohort. The two study groups were similar across a number of demographic variables including gender and age. When comparing HRU, significant differences were found in the DMT vs. Non-DMT treated groups. The unadjusted analysis showed that there was a 39.2% reduction in ER visits (55.68/100 vs 24.25/100), a 35.9% reduction in MS related hospitalization costs (46.64/100 vs. 76.62/100) and a 15.6% reduction in hospitalization length of stay (5.14 vs. 6.09), respectively. The average cost per patient for the DMT treated group was $61,698 (16% ($33,983.87 due to DMT cost) compared to the total average cost per patient for the Non-DMT group ($72.49). Multivariable regression will be performed to examine differences in cost and utilization adjusting for differences in baseline characteristics. CONCLUSIONS: Although the total costs of care in the DMT group were substantially higher than in the Non-DMT group as expected, we found significantly beneficial reductions in HRU use that are costly drivers in health care.

PND32 ANALYSIS OF HEALTH CARE RESOURCE USE AND COST IN DMT TREATED VERSUS NON-DMT TREATED PATIENTS WITH MULTIPLE SCLEROSIS IN THE UNITED STATES Livington T1, Fay M1, Iyer R2, Eisenberg S3 1Biogen Idec, Weston, MA, USA, Biogen Idec, Cambridge, MA, USA, 3Gemini Healthcare LLC, Westbrook, CT, USA BACKGROUND: Multiple studies have demonstrated the benefits of DMTs in slowing disease progression and reducing the cost of care. OBJECTIVES: To compare populations, costs, and health care resource utilization (HRU) in patients with MS treated with a disease modifying treatment (DMT) versus those who were not (Non-DMT). METHODS: A retrospective analysis of integrated medical and pharmacy claims data was analyzed inpatients with a diagnosis of MS (ICD-9 code 340.0) initiating DMD treatment in 2002 on or after 1/1/2002. Patients were stratified by episodes of worsening symptoms or relapses. Patient adherence to medications can help reduce or lessen relapses; however, non-adherence is a recognized problem by episodes of worsening symptoms or relapses. Patient adherence to medications is associated with lower non-DMD medical and indirect costs and decreased health care resource use for MS patients.

PND33 ADHERENCE OF MULTIPLE SCLEROSIS PATIENTS TO DISEASE MODIFYING TREATMENT AND ITS IMPACT ON QUALITY OF LIFE Srisaila A1, Prado M2, 1Analysis Group, Boston, MA, USA, 2Biogen Idec, Cambridge, MA, USA OBJECTIVES: Disease-modifying therapies (DMTs) play an important part in the treatment of Multiple Sclerosis (MS). Non-Adherence to DMT affects therapy success and quality of life. The present study investigated patient adherence to approved DMTs for MS among geographically and culturally diverse patient populations and their impact on health related quality of life. METHODS: The study was an observational, post-market surveillance study conducted using OptumHealth® and Insights® claims database on MS patients (≥2 diagnoses of ICD-9-CM 340.xx) initiating DMT therapy in 2002 through 2012. Direct medical costs (reimbursements to providers), indirect costs (patient time) and health-related quality of life were assessed using the EQ-5D-3L instrument. RESULTS: A total of 1,538 patients met the selection criteria (baseline age 43.6 years, 63% female). Adherence measured by proportion of days covered (PDC) declined from 82% at 6 months to 67% at 36 months following initiation (medication possession ratio of 79% over the observation period). 42% of patients discontinued DMD therapy; 22%, 31%, and 47% of patients had PDC<40%, 40% to 79%, and ≥80%, respectively. Non-DMT direct costs ($36,119, $30,277, and $25,886) and indirect costs ($23,194, $16,872, and $13,568) decreased substantially with higher adherence (PDC<40%, 40% to 79%, and ≥80% at 36 months, respectively). Higher adherence was also associated with lower all cause and MS-related inpatient admissions and emergency visits. Similar trends were observed at 36 months. This study shows adherence to DMTs is associated with lower non-DMD medical and indirect costs and decreased health care resource use for MS patients.

PND34 EFFECT OF IMPROVING ADHERENCE TO DISEASE MODIFYING AGENTS ON HEALTH CARE RESOURCE UTILIZATION AND MEDICAL COSTS IN PATIENTS WITH MULTIPLE SCLEROSIS Vermaak S1, Davis M1, Calnan M1, Fay M1, Duh M1, Iyer R2. 1Biogen Idec, Boston, MA, USA, 2Biogen Idec, Weston, MA, USA OBJECTIVES: Prior studies have compared multiple sclerosis (MS) patients who are adherent to disease-modifying drug (DMD) therapy with those who are not, but have not analyzed the effect of varying levels of adherence on patient outcomes. This study characterized the benefits and cost offsets of increasing adherence to DMDs. Health care costs and resource use were assessed for patients with different adherence levels at various follow-up periods following DMD initiation. METHODS: An analysis was conducted using OptumHealth® and Insights® employer claims database on MS patients (≥2 diagnoses of ICD-9-CM 340.xx) initiating DMT therapy in 2002. Direct medical costs were reimbursed to providers, while indirect costs (i.e., productivity) and health-related QOL were assessed using the EQ-5D-3L instrument. RESULTS: 1,538 patients were studied, and baseline characteristics were similar across the adherence levels. The sample included 1454 unique patients from 216 regions and teaching status. Adherence was associated with lower MS-related inpatient and outpatient visits and inpatient and outpatient costs. CONCLUSIONS: Improving adherence to DMDs is associated with lower non-DMD medical and indirect costs and decreased health care resource use for MS patients.

PND35 PATIENT-REPORTED MOTIVATIONS FOR MEDICATION SWITCHING AND/OR ADHERENCE CHALLENGES AMONG PATIENTS WITH MULTIPLE SCLEROSIS Srisaila A1, Prado M2 1Strategic Market Insight, Acton, MA, USA, 2Real Health Data, Santa Cruz, CA OBJECTIVES: MS is a chronic, progressive, autoimmune disease that is characterized by episodes of worsening symptoms or relapses. Patient adherence to medications can help reduce or lessen relapses; however, non-adherence is a recognized problem in patients with MS. The objectives of this study are to better understand patients’ reasons for medication adherence or non-adherence (i.e., adherence) and how patients stopped, what if anything they took when as a replacement or an addition as well as to the patients’ reaction(s) to new medication or non-medication. METHODS: We extracted 150 records for MS patients from a unique database of physician-patient interactions (RealHealth Data). Using Atlas ti, we analyzed these records to identify the most common reasons for medication adherence or non-adherence and how patients stopped, what if anything they took when as a replacement or an addition as well as to the patients’ reaction(s) to new medication or non-medication. RESULTS: On average, patients’ ages ranged from 18-45, 66% of patients reported their pain as a 5 or greater, 15% reported having depression or anxiety and 75% reported thinking about discontinuing their prescribed medications. Patients’ functional disability was similar to the general MS population, with a noted variability of motor skills. The medications prescribed to patients included Aubagio (5%), Copaxone (22%), Extavia/Betaseron (15%), Gilenya (17%), Rebif (14%), Tecfidera (10%) and Tysabri (19%). Patients reported...