TRIPTANS FOR MIGRAINE THERAPY: A COMPARISON BASED ON NUMBER NEEDED TO TREAT AND DOSES NEEDED TO TREAT

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OBJECTIVES: Managed care and other decision makers need sound comparative information to support the formulary selection and reimbursement decisions for the treatment of migraine. The objective of this study was to compare currently marketed triptan therapies using number-needed-to-treat (NNT) and doses-needed-to-treat (DNT) measures. DNT was further marketed through number-needed-to-treat (NNT) migraine. The objective of this study was to compare currently marketed triptan therapies using number-needed-to-treat (NNT) and doses-needed-to-treat (DNT) measures. DNT was further used to derive triptan treatment cost to achieve 100 successfully treated patients—the lowest number of doses to successfully treat 100 patients—the lowest number of doses to successfully treat 100 patients. Rizatriptan 5mg had the highest NNT (597 patients). Eletriptan 40mg required 389 doses to successfully treat 100 patients—the lowest number of doses of the triptans considered; rizatriptan 5mg required the highest number (662 doses). Eletriptan 40mg had the highest total triptan cost of $5639 to successfully treat 100 patients. Future research should further explore the utility of DNT in managed care decision-making.

RESULTS: Eletriptan 40mg had the lowest NNT, with 361 patients needing to be treated in order to have 100 patients achieve clinical benefit. Rizatriptan 5mg had the highest NNT (597 patients). Eletriptan 40mg required 389 doses to successfully treat 100 patients—the lowest number of doses of the triptans considered; rizatriptan 5mg required the highest number (662 doses). Eletriptan 40mg had the highest total triptan cost of $5639 to successfully treat 100 patients. The highest total triptan cost of treatment was for naratriptan 2.5mg, at a cost of $11,144.

CONCLUSIONS: Eletriptan 40mg provides the best value in terms of the lowest DNT. Eletriptan 40mg also was found to have the lowest total triptan cost to successfully treat 100 patients. Future research should further explore the utility of DNT in managed care decision-making.

COST-EFFECTIVENESS OF ELETRIPTAN VERSUS ZOMITRIPTAN: RESULTS FROM A RANDOMIZED CONTROLLED TRIAL

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OBJECTIVES: The objective of this study was to compare the cost-effectiveness of eletriptan to zolmitriptan using 24-hour sustained headache pain response as the measure of migraine treatment outcome. METHODS: This economic analysis was based on data derived from a randomized, multi-center, double-blind, double-dummy, parallel group, placebo controlled, single-attack study of treatment for acute migraine. Patients enrolled in the clinical trial were randomized to eletriptan 40mg, zolmitriptan 2.5mg, or placebo. The clinical efficacy data from the two active treatment arms were combined with published drug cost data to assess the relative cost-effectiveness of eletriptan versus zolmitriptan. The cost per successfully treated patient (CPSTP) was calculated for both treatment groups as the ratio of the total triptan cost for treating all patients to the number of patients classified as being successfully treated. The health authority costs included eletriptan 40mg at 3.40€ per dose and zolmitriptan 2.5mg at 3.58€ per dose. The 24-hour sustained headache pain response rate was the effectiveness measure used in the denominator of the CPSTP ratio. RESULTS: For the 24-hour sustained headache pain response measure, a significantly larger proportion of patients were successfully treated with eletriptan versus zolmitriptan (p = 0.0099). The CPSTP estimates were 10.34€ (95% CI: 8.97€–12.17€) for eletriptan and 14.66€ (95% CI: 12.53€–17.45€) for zolmitriptan. CONCLUSIONS: For the 24-hour sustained headache response endpoint, eletriptan 40mg performed significantly better than zolmitriptan 2.5mg. For the cost per successfully treated patient, eletriptan costs were significantly lower compared to zolmitriptan costs. The results of this study add to the body of clinical and economic evidence supporting the use of eletriptan for the treatment of acute migraine, and can be used to assist decision makers in the allocation of scarce resources.

IMPACT OF MIGRAINE FREQUENCY ON HEALTH UTILITIES

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OBJECTIVES: To relate migraine frequency to general health status among a cohort of migraineurs. METHODS: We conducted a cross-sectional survey of patients aged ≥ 18 years diagnosed with episodic migraine (and no migraine at time of recruitment) and ≥ one-year of migraine history. Patients were enrolled at three geographically diverse US centers representing varied models of care. Subjects completed a questionnaire that included demographic/clinical information and the Health Utilities Index Mark three (HUI3). Multivariate analyses were undertaken to assess the relationship between HUI3 and migraine frequency, controlling for study center, demographics (age, sex, income) and clinical characteristics (comorbidities, migraine severity, presence of aura, duration, disruptiveness of migraine to family and friends). RESULTS: The mean age of subjects (n = 150) was 44 years and 87% were female. Patients averaged 24 years of migraine history, and 41% reported using preventive medication. Mean (±SD) monthly migraine frequency was 4.4 (±3.6), with 34% reporting ≤ two migraines per month and 20% reporting > six per month. Mean (±SD) HUI3 score was 0.62 (±0.26) and the median was 0.66. Migraine frequency was significantly (p < 0.05) and negatively associated with HUI3 scores. Adjusted mean HUI3 score was 0.64 for those with ≤ two migraines per month, 0.57 for those with > two to four migraines per month, 0.53 for those with > four to six migraines per month, and 0.50 for those with > six migraines per month. Migraine frequency was positively associated with higher levels of impairment on the emotion, cognition, and pain components of the HUI3. CONCLUSIONS: Migraineurs suffer substantial impairment in health utility, with more frequent migraines associated with greater impairment. These utility data are useful for assessing the burden of migraine headache, and for evaluating the impact and cost-effectiveness of interventions that reduce the rate of migraine attacks.

FURTHER VALIDATION OF THE MIGRAINE TREATMENT SATISFACTION MEASURE

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OBJECTIVE: Initial development of a new measure for assessing patient satisfaction with treatment for migraine headaches utilizes a four-part conceptual model incorporating patient
expectations and preferences with self-reported outcomes and satisfaction. In this report we evaluate the psychometric performance of the Migraine Treatment Satisfaction measure (MTS) using participants from a randomized controlled trial of headache management. METHODS: Enrolled migraineurs completed the first two modules of the MTS upon enrollment in the treatment program and the final two modules at six-months. Internal consistency reliability was computed within each of the four modules. Discriminant validity was ascertained by comparison with the Migraine Disability Assessment Questionnaire (MIDAS), Patient Health Questionnaire (PHQ-9), and Migraine Symptom Frequency and Bothersomeness (MSFB) scores. For convergent validity, Pearson’s correlation was used to measure associations between MTS scores, general health status (SF-36), MIDAS and MSFB. RESULTS: Overall, 124 migraineurs (mean age 45.4 years, 75% women, 54.1% Caucasian) were enrolled. Internal consistency statistics for the expectations, outcomes, importance ratings, and satisfaction measures were within acceptable ranges (0.83, 0.86, 0.85, and 0.95, respectively) and were consistent with earlier development work for this measure. Satisfaction (MTS) decreased significantly as depression (PHQ-9 scores) increased. MTS scores by symptom bothersomeness tertiles and symptom frequency tertiles showed a significant decrease in satisfaction among those experiencing moderate-severe symptom bothersomeness and symptom frequency. Derived MTS scores showed strong associations with MSFB scores (r = 0.301; p < 0.01), MIDAS (r = 0.267; p < 0.01), general health (r = 0.253; p < 0.05), mental health (r = 0.217; p < 0.05) and vitality subscales of SF-36 (r = 0.214; p < 0.05). Patients on triptans reported a significantly higher satisfaction compared to patients on analgesics (r = 0.214; p < 0.05). RESULTS: Satisfaction with Relpax treatment as well as other treatment outcomes were consistent with the results observed in the Relpax clinical trials.

NEUROLOGICAL DISORDERS—Multiple Sclerosis

EFFECT OF IMMUNOMODULATORY THERAPY AND OTHER FACTORS ON PRODUCTIVITY IN MS

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OBJECTIVE: Examine factors that influence work days missed among employees diagnosed with multiple sclerosis (MS).

METHODS: This retrospective analysis used a claims database with inpatient and outpatient visits, prescription drug services, and time missed from work for the years 1999 through 2002. Employees with a diagnosis of MS were identified and examined over the calendar year of first observed diagnosis in the database (N = 284). Multivariate regressions controlling for demographic characteristics, overall severity of illness, and type of immunomodulatory medication examined factors that influence days missed from work.

RESULTS: Demographic characteristics, overall severity of illness, and type of immunomodulatory therapy all impacted time missed from work. Individual comorbid diagnoses had no impact on time missed from work. Comparing individuals treated with interferon beta-1a (intramuscular), interferon beta-1b, or the specific immunomodulator glatiramer acetate to those who received no treatment for MS revealed that only glatiramer acetate was associated with significantly fewer days missed from work for short term disability (18.24 fewer days, p = 0.03), worker’s compensation (29.30 fewer days, p = 0.04) or any reason (53.70 fewer days, p = 0.003). Average wage estimates of $22.18 and research that reveals productivity lost due to absence averages 1.61 times the wage suggest an annual productivity savings of $15,340 associated with glatiramer acetate. CONCLUSIONS: Demographic characteristics and overall severity of illness impact time missed from work for employees diagnosed with MS. Only MS treatment with glatiramer acetate was associated with significantly fewer days of work missed.

THE IMPACT OF MEDICARE PART D ON ECONOMIC BARRIERS TO PRESCRIPTION MEDICATIONS AMONG BENEFICIARIES WITH MULTIPLE SCLEROSIS

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OBJECTIVES: 1) Identify the prevalence of access barriers to prescription medications among beneficiaries with Multiple Sclerosis (MS); and 2) estimate the out of pocket price of commonly used prescription medications among insured and under-insured MS beneficiaries.

METHODS: Using claims data from the Medicare Current Beneficiary Survey (MCBS) 1992–2001, we identified 156 beneficiaries with a diagnosis of multiple sclerosis on four or more claims (ICD-9 340). The MCBS is an overlapping panel survey linked to associate claims that includes questions on out-of-pocket price, access, and use of prescription medications. We estimated the average out-of-pocket price of prescription medications and prevalence of perceived economic barriers to address the hypothesis that the expansion of Medicare