PND2 QUANTIFYING COST OUTCOMES DIFFERENTIATED BY GENDER AND AGE IN THE TREATMENT OF MIGRAINE HEADACHE USING STEP VS. STRATIFIED CARE
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OBJECTIVES: The objective of this study was to estimate the cost savings of STEP vs. Stratified (STRAT) migraine headache care differentiated by age and gender. METHODS: All direct and indirect costs of migraine headache treatments are a prevalent disorder resulting direct costs of $2,571 per person per year on average which includes hospital visits and prescription drug costs. The indirect costs of migraine headaches are estimated to be about $13 billion a year indirectly affecting the workplace through an estimated $8 billion due to lost work days alone. A Monte Carlo probabilistic simulation was conducted to estimate the cost-benefit of stratified care based on MIDAS scores vs. the more commonly applied step care. Although STEP care delays the initiation of triptan therapy which is generally more costly and potentially habit forming, there may be cost-benefit from evaluating patient history and disease severity through MIDAS scores and advancing patients to more advanced therapies in severe cases. RESULTS: As expected, the greatest cost differences when adopting STRAT was for MIDAS III women age 40-49 due to the peak prevalence at this age/gender (STRAT vs. STEP = $547 vs. $1,572 per case) with up to $992 found for males of the same age ($515 vs. $1,464). However, no cost differences for STRAT vs. STEP care for aged 60+ was significant ($136 vs. $326) and the difference for patients (age 12-17) was $199. Adoption of STRAT care in routine clinical practice yields differences of $1,025 and $949 per patient per year for females and males respectively. Further evidence shows that cost differences for those 60+ were $1,464 and $992, and those under age 30 were $199. CONCLUSIONS: Although the differences for the latter two age strata were smaller, they may have implications for specialized populations such as Medicare and Medicaid and the impact they have on plan budgets.

PND23 ECONOMIC EVALUATION OF DEXMEDETOMIDE FOR SEDATION IN THE INTENSIVE CARE UNIT
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OBJECTIVES: Dexmedetomidine is an alpha-2 receptor agonist used in continuous infusion for the sedation of critically ill patients in intensive care units. Patients who are intubated and mechanically ventilated. Compared to midazolam in the sedation of intensive care unit patients, dexmedetomidine showed a decrease in time spent on ventilator, fewer episodes of delirium and reduced incidence of tachycardia and hypertension. The aim of this study was to assess the economic impact, in a Canadian context, of dexmedetomidine for sedation in intensive care unit compare with midazolam, a GABA agonist. METHODS: This economic evaluation was performed using a cost-consequences analysis, according the perspective of Canadian Health Care system. The time horizon chosen is an intensive care unit stay with a maximum length of 30 days. Clinical data were obtained from a prospective, randomized, double-blind trial by Riker and al. comparing dexmedetomidine and midazolam. Costs considered in this evaluation were those of the medications, of the mechanical ventilation, of the delirium episodes, and those associated with adverse events of dexmedetomidine-related intervention. All costs were adjusted to 2010 and were reported in Canadian dollars. RESULTS: The average cost of medication was higher with dexmedetomidine ($1,930) than with midazolam ($1,918), but the average cost associated with mechanical ventilation and with the management of delirium were lower with dexmedetomidine ($2,933 and $3,630 respectively) than with midazolam ($4,848 and $5,149). Overall cost per patient with dexmedetomidine ($8,525) was lower than with midazolam ($9,817). Deterministic sensitivity analysis confirmed the robustness of this difference. CONCLUSIONS: The results of this cost-consequences analysis indicated that the use of dexmedetomidine is a favorable strategy in terms of clinical consequences and economic impact compared to midazolam. Compared to midazolam, dexmedetomidine is a less expensive strategy associated with a lower occurrence of delirium and a shorter duration of mechanical ventilation.

PND24 QUALITY OF LIFE USING TREATMENTS FOR PARKINSON’S DISEASE: AN ECONOMIC COMPARISON BETWEEN ROPINIROLE AND LEVODOPA/ CARBIDOPA
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OBJECTIVES: Parkinson’s disease(PD) is the second common neuro-degenerative disease in US older adults. Until recently, Levodopa was the only treatment for PD. Although, Ropinirole is approved by FDA for PD, there are no cost-effectiveness studies comparing these treatments. The objective of our study is to perform cost-effectiveness analysis comparing Ropinirole and the combination therapy of Levodopa/Carbipora in the treatment of PD. METHODS: A cost-effectiveness analysis was performed from the patient’s perspective using the Markov model and Monte Carlo simulation. The effectiveness is measured in terms of quality adjusted life years(QALY). 2009 U.S. dollars. One way and two way sensitivity analyses with 25% change in cost and 20% change in QALY values were performed and incremental cost effectiveness ratio(ICER) was calculated. RESULTS: The Ropinirole therapy resulted in a gain of 2.82 QALY’s at a cost of $107,062 compared to Levodopa/Carbipora combination therapy which resulted in 2.35 QALY’s at $102,423 at the end of 5 years. The expected cost per QALY was $37,965 for Ropinirole while that of Levodopa/Carbipora combination was $43,584. One way and two way analyses were consistent, validating the results. CONCLUSIONS: Our cost-effectiveness analysis indicates that Ropinirole is a better option as compared to Levodopa/Carbipora for treatment of patient suffering from PD.

PND25 ECONOMIC TRENDS ASSOCIATED WITH NATALIZUMAB THERAPY IN A COMMERCIALY MANAGED MULTIPLE SCLEROSIS POPULATION
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OBJECTIVES: Identify a population of multiple sclerosis (MS) patients new to treatment with natalizumab. Methods: Data from the retrospective evaluation of performance of the analysis was based on the presence of a diagnosis of MS (ICD-9 code 340.*) during calendar years 2005 through 2008. Economic information related to the treatment of MS was captured using the Episode Treatment Group™ software. RESULTS: From the database, 76 MS patients that started natalizumab treatment and had 4 full calendar years of data were observed. These patients were observed for the year prior to start of natalizumab treatment in 2006, through the end of the 2008 calendar year. Patients were stratified by continued use of natalizumab during the study period. For all patients, there were significant increases in annual pharmacy costs ($10,967 vs. $13,067) during the year natalizumab treatment was initiated, in addition to outpatient medical services ($8,383 to $11,744). For patients who continued natalizumab for the entire study period, inpatient costs decreased from $2,630 to an average of $3 per year; emergency room costs in this group also decreased from a maximum of $537 to $218 annually. For patients who discontinued natalizumab during the study period, there were increased inpatient costs after discontinuation ($2,630 vs. $6,701). CONCLUSIONS: Thus the study size is small, the cost observations can enable decision-makers to better understand costs associated with the short and long-term use of natalizumab for the treatment of MS.

PND26 MEASURING THE IMPACT OF NATALIZUMAB THERAPY ON HEALTH CARE UTILIZATION IN A COMMERCIALY MANAGED MULTIPLE SCLEROSIS POPULATION
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OBJECTIVES: Identify a population of MS patients new to treatment with natalizumab. Methods: Data from the retrospective evaluation of effects of natalizumab treatment on health care utilization in a commercial managed multiple sclerosis population was performed. RESULTS: From the database, 76 MS patients that started natalizumab treatment in 2007 and had 4 full calendar years of data were observed. In the year of treatment initiation with natalizumab, there was an overall increase in the number of prescriptions received ($2,630 to $6,701). As shown in the figure, during the year treatment initiation, hospitalization for those ages 60-79 was $1,025 and $949 per patient per year for females and males respectively. Further evidence shows that cost differences for those 60+ were $1,464 and $992, and those under age 30 were $199. CONCLUSIONS: Although STEP care delays the initiation of triptan therapy which is generally more costly and potentially habit forming, there may be cost-benefit from evaluating patient history and disease severity through MIDAS scores and advancing patients to more advanced therapies in severe cases. Although, Ropinirole is approved by FDA for PD, there are no cost-effectiveness studies comparing these treatments. The objective of our study is to perform cost-effectiveness analysis comparing Ropinirole and the combination therapy of Levodopa/Carbipora in the treatment of PD. METHODS: A cost-effectiveness analysis was performed from the patient’s perspective using the Markov model and Monte Carlo simulation. The effectiveness is measured in terms of quality adjusted life years(QALY). 2009 U.S. dollars. One way and two way sensitivity analyses with 25% change in cost and 20% change in QALY values were performed and incremental cost effectiveness ratio(ICER) was calculated. RESULTS: The Ropinirole therapy resulted in a gain of 2.82 QALY’s at a cost of $107,062 compared to Levodopa/Carbipora combination therapy which resulted in 2.35 QALY’s at $102,423 at the end of 5 years. The expected cost per QALY was $37,965 for Ropinirole while that of Levodopa/Carbipora combination was $43,584. One way and two way analyses were consistent, validating the results. CONCLUSIONS: Our cost-effectiveness analysis indicates that Ropinirole is a better option as compared to Levodopa/Carbipora for treatment of patient suffering from PD.

PND27 MEDICO-ECONOMIC EVALUATION OF LACOSAMIDE ADJUVANT THERAPY IN THE TREATMENT OF PATIENTS WITH REFRACTORY EPILEPSY IN THE UNITED STATES
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OBJECTIVES: To calculate and compare the incremental cost-utility ratios for standard antiepileptic drug (AED) therapy with and without adjunctive lacosamide in patients with uncontrolled partial-onset seizures. METHODS: The model simulated the treatment pathway of a hypothetical cohort of 1000 patients over two years from the third party payer perspective in the United States in 2010. A decision tree was split into four phases of six months each during which patients can become seizure free, experience a seizure reduction (responder defined as at least 50% reduction in seizures), or dropout due to non-response. The standard therapy arm included five adjunctive therapies: carbamazepine, lamotrigine, levetiracetam, topiramate, and valproate. The likelihood of being in a particular health state...