Hispanic Caucasian (NHC) patients in a managed care plan.  

METHODS: A retrospective claims database analysis was conducted using eligibility, pharmacy, and medical claims data from a large US health plan, supplemented by a linked database of socioeconomic characteristics (race, ethnicity, household income). Patients 6–64 years newly treated with ADHD therapy between January 1, 2000 and December 31, 2004, with continuous enrollment for 6 months prior and 12 months following the earliest ADHD prescription were selected. RESULTS: HIS subjects (N = 2827) were younger (mean age 19.0 vs 21.6 years), had shorter duration of continuous insurance coverage, and were in lower income brackets compared to NHC subjects (N = 59,820) (p < 0.001). Anxiety and depression were more commonly diagnosed among NHC (16% and 24%) compared to HIS subjects (13% and 20%). Though rates of single prescription filling for ADHD medications were high in both groups (27%), HIS subjects were less compliant with therapy compared to NHC subjects. HIS status was a significant predictor of total and ADHD-related health care costs during the follow-up period, controlling for patient age, index drug, insurance type, and geographic region. Among HIS, adjusted mean total costs were 21% lower than among NHC ($3295 vs $4187, p < 0.001); ADHD-related costs were 29% lower ($969 vs. $986, p < 0.001) for HIS vs. NHC. HIS subjects had fewer physician office and acute care visits during follow-up. Within race/ethnic groups, increasing income was associated with increased all cause, but decreased ADHD-related cost and utilization. CONCLUSION: This study indicates that total and ADHD-related health care costs are lower among HIS patients with ADHD than in NHC patients, with a greater difference for ADHD related costs than total costs. HIS subjects were less persistent with ADHD therapy and used fewer health care services compared to NHC subjects.

PMH33  
PROFILING UTILIZATION PATTERNS OF ANTIPSYCHOTICS AMONG PATIENTS WITH BIPOLAR DISORDER: A CLAIMS DATA ANALYSIS  
Hassan M1, Madhavan SS2, Kalsekar ID1, Rajagopalan K1, Islam S3, Kavookjian J2, Miller LA2, Makela EH2  
1AstraZeneca Pharmaceuticals LP, Wilmington, DE, USA, 2West Virginia University, Morgantown, WV, USA, 3Butler University, Indianapolis, IN, USA  
OBJECTIVES: To profile antipsychotic use among bipolar disorder patients, including antipsychotic type, duration of use, gaps in therapy, and concurrent mood-stabilizer and antidepressant therapy. METHODS: Bipolar disorder patients with at least two antipsychotic prescriptions filled between January 1, 1999, and December 31, 2001 were extracted from a Medicaid database. Initiation of antipsychotic therapy was indicated by the absence of claims for antipsychotic medication within 90 days prior to the first prescription. Duration of therapy was calculated from the first prescription fill date to the end of 12 months follow-up or discontinuation of antipsychotic therapy. Gaps between refills were defined as the number of days between the depletion date and the fill date. A treatment gap category was calculated for each patient based on the longest continuous gap between refills. Antipsychotic use was considered to be first-line treatment if there were no claims for mood-stabilizers in the 12 months before antipsychotic initiation. Prescription claims in the 12-month follow-up period were examined to classify treatments as antipsychotic alone or combined with mood-stabilizer or antidepressant. RESULTS: Among 832 patients initiated on antipsychotics, 75.4% were initiated on atypicals and 24.6% on typicals. The average duration of therapy was 224.5 (±140.5) days. In total, 58.9% of patients had gaps between refills exceeding 30 days, and 22.7% had at least one gap exceeding 90 days. The average duration of the longest gap was 61.2 (±70.3) days. Antipsychotics were the first-line treatment in 66.8% of patients. During follow-up, 56.3% of patients used antipsychotics alone, 43.8% used combinations of antipsychotics and mood-stabilizers, and 73.7% used antipsychotics with antidepressants. CONCLUSION: Short duration of antipsychotic use and long gaps in therapy indicate poor adherence to therapy in bipolar disorder patients. About two-thirds of patients initiate antipsychotics before mood-stabilizers. Concomitant use of a mood-stabilizer or antidepressant with antipsychotic is highly prevalent.

PMH34  
PHARMACOLOGIC TREATMENT OF GENERALIZED ANXIETY DISORDER WITH COMORBID DEPRESSION AND PAIN CONDITIONS  
Ye W1, Zhao Z, Zhu B, Swindle R  
1Eli Lilly and Company, Indianapolis, IN, USA  
OBJECTIVES: To examine pharmacologic treatment patterns for individuals diagnosed with Generalized Anxiety Disorder (GAD) with comorbid depression and/or pain. METHODS: Data were from PharMetrics Integrated Outcomes Database. Patients aged 18–64 were selected if they had a diagnosis of GAD (ICD-9-CM: 300.02) between January 2003 and June 2004, preceded by 6 months without GAD diagnosis, and continuous enrollment during 6-month prior and 12-month after GAD diagnosis. Treatment regimens during the year after GAD diagnosis were examined for six-classes of psychotropics (anxiolytics, antidepressants, anticonvulsants, noradrenergic agents, atypical antipsychotics, and hypnotics). Comparisons were made for patients with GAD only versus those with comorbid depression and/or pain conditions. Poisson regressions controlling patient demographic and clinical characteristics (including provider specialty and other comorbidities), were used to evaluate the impact of depression and pain on GAD treatment patterns. RESULTS: Of 36,435 patients (mean age 41.3 years, 67% female) included in this analysis, 23.8% had GAD only, 15.5% GAD/depression, 32.8% GAD/pain, and 28.0% GAD/depression/pain. For patients with GAD/depression/pain, 48.5% received anxiolytics, 15.7% anticonvulsants, and 15.4% hypnotics. 44.2% received ≥3 and 11.9% ≥6 of different drugs of psychotropics, which were all significantly higher than other groups. Compared to GAD/depression patients, GAD/pain received significantly more analgesics (46.2% vs. 21.3%, p < 0.001) and muscle relaxants (14.5% vs. 3.2%, p < 0.001), and less antidepressants (44.6% vs. 71.5%, p < 0.001). Regression results from Poisson model revealed that patients with GAD/depression/pain received 0.67 more classes of and 1.28 more number of psychotropic drugs (p < 0.001 for both) when compared to GAD only. Similar results were also observed for patients with GAD/depression and for those with GAD/pain though to a lesser extent. CONCLUSION: The findings suggest that there is a high comorbid prevalence of depression and pain with GAD. Associated with this high comorbidity, complex patterns of polypharmacy are common in the treatment of GAD.

PMH35  
TREATMENT INITIATION WITH ATOMOXETINE VS. STIMULANTS FOR ADULTS WITH ADHD IN MEDICAID SETTINGS  
Ye W1, Van Brunt D2, Pohl G1, Johnston JA1, Chang LL2  
1Eli Lilly and Company, Indianapolis, IN, USA, 2IMS, Plymouth Meeting, PA, USA  
OBJECTIVES: To determine factors associated with initiation of atomoxetine (ATX), stimulants (STIM), or long-acting stimu-
lants (LA-STIM) in adults with ADHD using Medicaid. METHODS: Data were from the IMS Health LRx Database. Patients covered by Medicaid age ≥ 18 years were selected if they initiated treatment with an ADHD medication categorized as ATX, any STIM, or LA-STIM between January 2005 and December 2005. Initiation was defined as first use of a medication preceded by 120 days without a prescription in the same category. Contrasts of most-recent initiations of ATX vs. LA-STIM or ATX vs. LA-STIM, were modeled via stepwise logistic regression. Factors considered were age, gender, prior ADHD medications, initiation type (treatment naive, switch, add-on, reintroduction), concomitant medications, provider specialty, and line of therapy. RESULTS: A total of 8672 patients (58.04% female) most recently initiated treatment with ATX, 27,574 (59.72% female) with STIM, and 15,938 (57.02% female) with LA-STIM. Patients who were more likely to initiate ATX than STIM (lower confidence bound of adjusted odds ratios > 1) were males, naive to therapy, or had taken different ADHD medications in history prior to the current initiation, had prescriptions from primary care physicians or nurse practitioners, had previous use of ATX, or had concomitant use of antidepressants, antianemics, anxiolytics, or receiving their prescription from neurologists. The model factors selected for initiation of ATX vs. LA-STIM were consistent with those for the comparison with STIM. CONCLUSION: The factors significantly associated with initiation of ATX vs. STIM or LA-STIM suggest that therapy with ATX and STIM are addressing different patient treatment needs. The findings suggest that ATX is preferentially prescribed for patients with psychiatric comorbidities.

MENTAL HEALTH—Methods & Concepts

DISEASE PROGRESSION IN ALZHEIMER’S DISEASE PATIENTS TREATED WITH A CHOLINESTERASE INHIBITOR IN CLINICAL PRACTICE

Gustavsson A1, Parmler J2, Ganguly R3, Minthon L1, Jonsson L2
1European Health Economics, Stockholm, Sweden, 2Stockholm School of Economics, Stockholm, Sweden, 3GloaxSmithKline Research Triangle Park, NC, USA, 4Malmö University Hospital, Malmö, Sweden, 5European Health Economics, London, UK

OBJECTIVES: To model disease progression across multiple domains in Alzheimer’s disease (AD) patients treated with a cholinesterase inhibitor in clinical practice. METHODS: 435 AD patients starting treatment with donepezil in 11 centers in Sweden were followed up to 3 years. In 6-month intervals data was collected on cognitive function (ADAS-Cog) physical function (IADL and PSMS scales), care setting and resource utilization. Regression modelling was used to identify determinants of disease progression rates and to establish equations predicting progression across multiple domains. A dynamic panel approach was used to model the 6 months change in cognitive function. For physical function a random-effects model was fitted using ADAS-cog and lagged ADAS-cog as explanatory variables. In both models other patient characteristics (e.g. sex, age, disease duration and ApoE-genotype) were included when significant. RESULTS: The progression in ADAS-cog was estimated to increase with higher progression in the previous 6 months period, i.e. a one point higher progression in the previous period would translate into 0.4 points higher progression in the present cycle. Also, patients having at least one ApoE ε2 but no ApoE ε4 allele were estimated to have about 2 points higher progression. Both IADL and PSMS scores were estimated to decrease with higher present and lagged ADAS-cog scores (between 0.03 and 0.06 points for each ADAS-cog point) and higher disease duration (0.14 to 0.2 points for each year). Also, male patients were estimated to have 0.46 points lower IADL scores. CONCLUSION: The estimated regression functions can be used in a regression model for simulation of long term disease progression. Adding treatment effects and resource utilization linked to disease severity this enables a dynamic framework for economic evaluation of any treatment intervention.

TREATMENT PERSISTENCE AND COMPLIANCE WITH GALANTAMINE ER

Yeaw J1, Crivera C2, Rupnow MF3, Ollendorf D1
1PharMetrics, a unit of IMS, Watertown, MA, USA, 2Ortho-McNeil Janssen Scientific Affairs, LLC, Titusville, NJ, USA

OBJECTIVES: Evaluate persistence and compliance patterns with once-daily galantamine ER vs. twice-daily galantamine IR and with galantamine ER vs. twice-daily rivastigmine in an employer-based retiree health benefit claims database. METHODS: Data were obtained from a 9 million member health benefit claims database. Patients > 60 years with at least one claim for galantamine ER, IR, or rivastigmine during the period 1/1/05–2/28/06 were eligible, with the first prescription as the index event. Patients had 6 months continuous enrollment pre- and post-index date. Galantamine ER patients were matched up to 1:3 to IR and rivastigmine patients based on propensity for galantamine ER therapy. Demographic and clinical characteristics were evaluated pre- and post- propensity matching using descriptive statistics for matched-pairs designs (e.g., t-tests, χ2 tests). Persistence was evaluated across matched-pair sets by measuring duration of continuous therapy from index date to a gap of more than twice the days supplied for the previous refill. Compliance with each treatment was assessed using medication possession ratio (MPR), calculated as total days supplied divided by total follow-up duration (180 days). Wilcoxon signed rank tests were performed to compare persistence and compliance measures for each matched-pair set. RESULTS: The study included 743 galantamine ER versus 1611 IR and 812 galantamine ER versus 1712 rivastigmine users. Demographic characteristics were similar between study groups. Mean age was 78.9 years, 55% were women, and 99% were institutionalized. Mean 6-month follow-up persistence rates were longer for galantamine ER versus IR (136.2 vs 128.7 days; p = 0.001) and for galantamine ER vs rivastigmine (135.1 vs 130.1 days; p = 0.029). Mean 6-month follow-up MPR was higher for galantamine ER vs IR (0.60 vs 0.55; p < 0.01) and trended higher for galantamine ER vs rivastigmine (0.60 vs 0.58; p = 0.083). CONCLUSION: Our findings suggest once-daily galantamine ER is associated with greater persistence and compliance compared to galantamine IR or rivastigmine.

ASSESSING PERSISTENCE OF ANTIPSYCHOTICS IN THE TREATMENT OF SCHIZOPHRENIA: USING THE DATA FROM PENNSYLVANIA MEDICAID TO UNDERSTAND THE CHALLENGES

Zhu B1, Ball DE2, Phillips GA1, Faries D2, Zhao Z2, Ascher-Svanum H3
1Eli Lilly and Company, Indianapolis, IN, USA

OBJECTIVES: Among the challenges in assessing persistence with medication time to all-cause discontinuation with pharmacy claims data are the potential variations in persistence definitions and data-cutting criteria. This study compared persistence on