OBJECTIVE: To examine the rates of AAP medication change during hospital stay and their impact on (i) 30-day readmission rates and (ii) 180-day healthcare charges.

METHODS: This retrospective analysis of electronic health records within the University of Utah Clinical Enterprise Data Warehouse included patients ≥18 years. with an inpatient primary diagnosis of schizophrenia or bipolar disorder between January 1, 2010-December 31, 2015. A medication change was defined as any addition or discontinuation of an AAP between hospital admission and discharge. Two-part generalized linear models and logistic regression evaluated the impact of AAP medication changes on 30-day readmission rates and 180-day total (inpatient, outpatient, ER, and pharmacy) healthcare charges, controlling for demographics, comorbid conditions, index AAP, index year, and pre-index charges.

RESULTS: From a total of 3,820 adults with schizophrenia and bipolar disorder, 14% (198/1,450) and 11% (250/2,370) experienced a medication change, respectively. No significant differences in baseline demographic and clinical characteristics were observed between those with and without a medication change. Compared to adults without a medication change, likelihood of 30-day readmission was 84% and 154% higher among adults with a medication change for schizophrenia and bipolar disorder, respectively ($P<0.01$). Total healthcare charges during the 180-day follow-up period were higher for inpatients with a medication change than those without a medication change [$6,332 and $5651 higher for inpatients with schizophrenia and bipolar disorder, respectively ($P=0.01$)].

CONCLUSIONS: This retrospective study showed that medication changes during hospitalization resulted in higher 30-day readmissions and total healthcare charges. Further research is warranted to assess if the impacts of medication changes are specific to some AAPs and to understand the reasons for medication changes.

SPONSORSHIP: Sunovion Pharmaceuticals.

F10 Prescriber's Response to Noncompliance Information: A Claims-Based Analysis of Patients with Serious Mental Illness

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BACKGROUND: New technologies such as digital medicine offer prescribers the opportunity to monitor patients' medication adherence objectively and in a timely manner. Such information could potentially allow prescribers to tailor medical decision-making to better meet patients' needs, improve treatment response, and minimize spending on unnecessary, costly medications. However, the impact of access to such information on real-world treatment decisions is unknown.

OBJECTIVE: To determine how prescribers' knowledge of medication compliance affects changes in treatment patterns of non-adherent patients with serious mental illness (SMI) in a real-world setting.

METHODS: Using prescriber reported information on patient non-compliance from 2008-2015 health insurance claims data, we examined whether prescribers' documented knowledge of non-compliance was associated with different prescribing patterns for patients with SMI including schizophrenia, bipolar disorder and major depressive disorder. All patients in our sample initiated an oral atypical antipsychotic and were objectively non-adherent (proportion of days covered [PDC] <80%). The primary outcomes were the share of patients who increased antipsychotic dose, augmented treatment, switched antipsychotic medications, or used a long-acting injectable (LAI). The key independent variable was provider-documented patient history of non-compliance (ICD-9: V15.81).

RESULTS: Among the 286,249 patients with SMI who initiated an antipsychotic and had PDC<80%, 4,033 (1.41%) had documented non-compliance. When prescribers documented non-compliance, patients were more likely to be switched to another antipsychotic (32.8% versus 24.7%, $P<0.001$), have their dose increased (24.4% versus 22.1%, $P=0.004$), or receive an (0.09% versus 0.04%, $P=0.008$) but were less likely to have augmented therapy with another antipsychotic (1.1% versus 1.3%, $P=0.035$) than patients with no documented non-compliance.

CONCLUSIONS: Among patients with documented non-compliance, rates of switching and LAI use were higher and augmentation was lower compared to patients with no documented non-compliance. Access to adherence information may reduce extraneous spending as prescribers may avoid unnecessary, costly augmentation among patients who do not respond to therapy because of non-adherence.

SPONSORSHIP: Otsuka America Pharmaceuticals.

F11 Healthcare Resource Use and Cost with Brexpiprazole Use in Patients with Major Depressive Disorder

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BACKGROUND: Major depressive disorder (MDD) is the principal cause of disability worldwide and is a significant contributor to the total global burden of disease. Brexpiprazole is a serotonin-dopamine activity modulator that was approved in July 2015 in the U.S. as an adjunctive treatment for patients diagnosed with MDD and for treatment of schizophrenia.

OBJECTIVE: To describe healthcare resource use and costs before and after brexpiprazole use in patients with MDD.

METHODS: Patients with a brexpiprazole pharmacy claim and ≥2 medical claims with MDD diagnosis were identified from QuintilesIMS' PharMetrics Plus claims database between 10 July 2015 and 31 March 2016. The date of the first brexpiprazole claim was the index date. Patients with ≥6 months of continuous enrollment before (pre-index) and after (post-index) index were included. Resource use and medical costs were measured during the pre-index period and post-index periods.

RESULTS: The study included 844 MDD patients initiated on brexpiprazole. Patients had on average (±SD) 5.0 (±3.7) brexpiprazole fills (with average 31.5±7.7 day supply) during 6 months of follow up. Mean age was 47.2 (±12.7) years; 69.4% were female; 57.5% had commercial and 38.9% had a self-insured group health insurance as their primary payer; 87.0% were enrolled in PPO plan and 7.7% in HMO plan; 55.9% had comorbid anxiety disorder; and 46.8% were prescribed brexpiprazole by a psychiatrist. Patients used 1.8 (±0.9) antidepressants on average in the 6 months prior to brexpiprazole. The proportion of patients with an all-cause hospitalization decreased from 8.1% to 6.6% after brexpiprazole use; average length of stay per hospitalization decreased from 5.8 (±4.8) days to 5.5 (±3.6) days; average number of all-cause hospitalizations decreased from 0.12 (±0.51) to 0.10 (±0.43) per patient. The proportion of patients with an ED visit decreased from 18.1% to 16.9%; average number of all-cause ED visits increased from 0.28 (±0.73) to 0.30 (±0.96) per patient. The proportion of patients with an MDD-related office visit decreased from 85.5% to 84.2%; average number of MDD-related office visits increased from 6.99 (±11.16) to 7.40 (±11.63) per patient. Average total medical cost per patient was $6,803 (±$18,277) before and $6,421 (±$13,055) after brexpiprazole use.

CONCLUSIONS: Among patients treated for MDD, brexpiprazole use resulted in a lower trend in hospitalizations and approximate savings of $400 in total medical cost.

SPONSORSHIP: Otsuka Pharmaceutical Development & Commercialization and Lundbeck.

F12 Budget Impact Analysis of Long-Acting Injectable Aripiprazole Once-Monthly 400 mg in Bipolar I Disorder

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BACKGROUND: Long-acting injectable (LAI) aripiprazole once-monthly 400 mg/300 mg (AOM 400), an extended release injectable suspension of aripiprazole, is under clinical investigation for the maintenance treatment of bipolar I disorder (BP-I).

OBJECTIVE: This analysis evaluated the budget impact of introducing AOM 400 as a maintenance treatment for BP-I, using LAI risperidone, paliperidone palmitate, oral cariprazine, oral asenapine, and best supportive care (BSC) as comparator treatments.

METHODS: A budget impact model was developed from a U.S. payer perspective, using treatment-related, hospitalization, and adverse event (AE) cost estimates for a hypothetical 1,000,000-member health plan. The analysis examined three steps: (1) estimation of the number of patients eligible to receive maintenance treatment, (2) prediction of the proportion of eligible patients treated with the comparator treatments for each year of a 5-year time horizon, and (3) estimation of the costs associated with drug acquisition, hospitalization, and AEs for each treatment.

RESULTS: Assuming a prevalence rate of 0.6%, a cohort of 1,000,000 insured health plan members represents a population of 6,000 patients eligible for BP-I maintenance treatment. Market share for AOM 400 was predicted to increase from 0.6% in year 1 (current scenario) to 1.3% in year 5 (predicted scenario). Increased use of paliperidone palmitate and oral asenapine were also projected (from 2.1% to 4.1% and from 1.2% to 2.6%, respectively, in year 5), with a corresponding decrease in oral cariprazine and BSC. Treatment-related costs had the greatest impact on total budget increases, followed by AE management costs. Conversely, hospitalization costs had the greatest cost-saving impact. For the hypothetical cohort of 1,000,000 insured health plan members, per member per month (PMPM) incremental cost would range from $0.06 PMPM in year 1 increasing to $0.26 PMPM in year 5.

CONCLUSIONS: The model demonstrated that utilizing AOM 400 as a maintenance treatment for BP-I would result in a modest impact on a health plan's budget over a 5-year time horizon.

SPONSORSHIP: Otsuka Pharmaceutical Development & Commercialization and Lundbeck.

F13 Cost-Effectiveness Analysis of Long-Acting Injectable Aripiprazole Once-Monthly 400 mg in Bipolar I Disorder

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BACKGROUND: With the approval of new long-acting injectable (LAI) formulations in the maintenance treatment of bipolar I disorder (BP-I), cost-effectiveness is a concern for health plan decision-makers.

OBJECTIVE: This analysis evaluated the cost-effectiveness of aripiprazole once-monthly 400 mg/300 mg (AOM 400) in the maintenance treatment of BP-I versus the comparator treatments LAI risperidone, paliperidone palmitate, oral cariprazine, oral asenapine, and best supportive care (BSC).

METHODS: A Markov state transition model with yearly cycle lengths up to 74 years (patient's lifetime) was utilized based on evaluation of published economic models in BP-I, recommendations in a systematic literature review on U.S. economic models, and assessment of the available data for AOM 400. The target population included U.S. patients diagnosed with BP-I per the DSM-5 criteria, confirmed by the Mini International Neuropsychiatric Interview, and who maintained stability on AOM 400 for at least 8 weeks. The model considered all costs and outcomes from the U.S. healthcare payer perspective. Key outputs included total costs, quality-adjusted life years (QALYs), incremental costs and QALYs, and incremental cost-effectiveness ratios (ICERs). Future costs and health effects were discounted at a rate of 3%. Both probabilistic and deterministic sensitivity analyses were performed to access the robustness of the results to parameter uncertainty.

RESULTS: The cost per QALY gained with AOM 400 versus comparators ranged from $2,007 versus oral asenapine to being a dominant strategy (i.e., lower costs and better outcomes) versus oral cariprazine, LAI risperidone, paliperidone palmitate, and BSC. Patients treated with AOM 400 were estimated to have fewer hospitalizations and mood episodes per patient (5.37) than comparators (range 6.33 for oral treatments to 6.54 for LAI risperidone, 7.64 for paliperidone palmitate, and 8.93 for BSC) for a lifetime horizon. The sensitivity analyses demonstrated that the results were robust to parameter uncertainty.

CONCLUSIONS: These results showed that AOM 400 may be a cost-effective alternative in the treatment of BP-I for U.S. payers when compared to other treatments.

SPONSORSHIP: Otsuka Pharmaceutical Development & Commercialization and Lundbeck.

F14 Treatment Patterns and Healthcare Resource Use Among Patients Admitted with a Diagnosis of Major Depressive Disorder Who Are at Imminent Risk for Suicide

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BACKGROUND: Major depressive disorder (MDD) is associated with substantial economic burden, and patients hospitalized because of MDD have up to a 35% lifetime risk of committing suicide.

OBJECTIVE: The objectives of this analysis were to evaluate and compare healthcare resource use, admission and readmission measures among MDD patients with imminent risk for suicide receiving ECT vs. no ECT during their initial hospitalization.

METHODS: Using the Premier Perspective Database, patients admitted between 1/1/2010 and 9/30/2015 with a diagnosis of MDD and Suicidal Ideation or Suicidal Attempt were included in the analysis. The first hospitalization was defined as the index hospitalization. Two cohorts of patients were identified based on receipt of ECT during their index hospitalization. Demographics, clinical characteristics, medication usage and healthcare resource utilization were compared between the two cohorts. Hospital readmission rates during the 6-months post-index hospitalization were also compared between the cohorts. We hypothesized patients receiving ECT during their index hospitalization were refractory to anti-depressant treatments, were clinically more severe requiring excessive healthcare utilizations compared to those that did not receive ECT during admission.