Using the mini-mental state examination (MMSE) we classified patients as mild (27–20), moderate (19–10) or severe (<10). We calculated the association between previous and current MMSE stage and the association between previous MMSE stage and institutionalization using multinomial logistic models with random effects to account for individual and center level correlation, controlling for demographic characteristics and time since last observation. The coefficients from the regressions were used to calculate predicted probabilities using the population means for each of the covariates. **RESULTS:** Our analysis was limited to 3,418 patients with dementia (52.3% probable AD) and two or more observations with complete data for our covariates of interest. Average baseline age was 76.72 years old. Average MMSE was 17.05. The majority were female, 50.4%. The regression coefficient for the previous MMSE stage was significant in all cases and suggests that being in a higher MMSE stage at the previous visit is associated with being in a higher MMSE stage or dead. Previous MMSE stage was found to be strongly associated with institutionalization. White, non-Hispanic, unmarried patients were more likely to be institutionalized, all else equal. Patients with non-AD dementia were more likely to be institutionalized than patients with AD. **CONCLUSIONS:** Patients with AD in the NACC -UDS database transition more quickly to more severe stages of MMSE than non-AD dementia patients. Non-AD dementia patients are more likely to transition to institutionalization and die than patients with AD.

MENTAL HEALTH – Cost Studies

PMH27

ESCITALOPRAM (GENERIC DRUG) IN MAJOR DEPRESSIVE DISORDER (MDD) – BUDGET IMPACT ANALYSIS

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OBJECTIVES: The purpose of this analysis was to estimate the impact of escitalopram (generic drug) reimbursement on the budget of the National Health Fund (NHF) in Poland. **METHODS:** The budget impact analysis was prepared for 5 years time horizon (2009–2013) from the public payer's as well as patient's perspective. Two scenarios were compared: present—without reimbursement of generic version of escitalopram and proposed—placing of escitalopram on the list of reimbursed drugs in Poland. It was assumed that escitalopram will take over a part of market of selective serotonin reuptake inhibitors (SSRIs) and selective serotonin-noradrenergic reuptake inhibitors (SNRIs). The analysis was performed in two variants: basic analysis, assuming new reimbursement limit for escitalopram which equals the retail price of generic escitalopram and alternative variant presuming equal reimbursement limits for escitalopram and venlafaxine. Additionally, the minimum and maximum case scenarios and one-way sensitivity analyses were performed. **RESULTS:** Assuming the reimbursement of generic escitalopram in basic variant, the annual expenses from the budget of the NHF for major depressive disorder treatment would rise from 344,723 PLN in first year to 5,770,153 PLN in fifth year in comparison to present scenario. In alternative variant, the estimated expenses would rise from 144,833 PLN in first year to 2,716,183 PLN in fifth year. From patient's perspective the expenses for MDD treatment would decrease in basic variant from 245,874 PLN to 4,829,704 PLN and in alternative variant from 45,984 PLN to 1,775,734 PLN in first and fifth year, respectively, in comparison to present scenario. **CONCLUSIONS:** Budget impact analysis showed that the reimbursement of generic escitalopram would increase expenses from the NHF's perspective and savings from patient's perspective.

PMH29

NATIONAL ESTIMATES OF THE INPATIENT BURDEN OF PEDIATRIC BIPOLAR DISORDER

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OBJECTIVES: Bipolar disorder (BPD) is a debilitating recurrent chronic mental illness, characterized by cycling states of depression, mania, hypomania, and mixed episodes. The objectives of this study were to calculate national estimates of the annual burden of inpatient hospitalizations of children and adolescents with bipolar disorder (BPD); to describe and compare the burden across various patient characteristics, hospital characteristics, and key comorbidities associated with BPD; and to determine the independent effects of these factors on hospitalization costs. **METHODS:** Discharge observations for children whose primary diagnosis was BPD were collected from the Kids' Inpatient Database (KID). The burden was estimated as total number of days in the hospital, total charges, and total costs. Mean costs and charges were calculated and were broken down by patient and hospital characteristics and by the top six comorbidities found for BPD. Ordinary–least-squares regression models explaining cost were estimated for both 2003 and 2006, and the models were compared by way of a Chow test. **RESULTS:** There were 39,136 (40,679) bipolar disorder discharges in 2003 (2006), with total associated costs of $176 ($233) million in 2003 (2006). The mean cost was $4,490 ($5,725), while the mean length of stay was 8.12 (8.99) days in 2003 (2006). Factors associated with higher cost included youth (younger than 13), being black, being from a high-income family, having many diagnoses, being insured by Medicaid, living in the North East or West regions of the country, and having a long hospital stay. **CONCLUSIONS:** Declining trends in mean cost and length of stay, documented in previous studies for children with BPD, persisted into 2003 but showed a slight reversal by 2006.

PMH30

COSTS ASSOCIATED WITH ANTIPSYCHOTIC MEDICATIONS AT CLINICALLY RECOMMENDED DOSES BASED ON MEDICAID CLAIMS DATA FROM EIGHT STATES

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OBJECTIVES: There is accumulating evidence of sub-therapeutic dosing of second-generation antipsychotics (SGAs), leading to suboptimal control of disease and higher overall treatment costs. Additional evidence is needed to better understand the clinical and economic outcomes of patients who receive clinically effective doses of SGAs. The objectives of this study were to distinguish patients receiving clinically recommended doses of SGAs and compare their medical care costs. **METHODS:** Patients with schizophrenia (N = 12,133) on an oral SGA (aripiprazole, olanzapine, quetiapine, risperidone or ziprasidone) were identified in Medicaid claims databases (2001–2008) from 8 states. Patients were followed for 18 months (6 month pre-index period during which patients did not receive an SGA, followed by a 12-month post-index utilization period to determine total costs). For patients on recommended dosing, costs were compared using a generalized linear model with a gamma distribution and log-link function, adjusting for baseline covariates (age, gender, race, pre-index costs, Charlson co-morbidity score, and specific psychiatric co-morbidities) with ziprasidone as the reference group. **RESULTS:** Of the 12,133 patients meeting study criteria 7,213 (59%) were taking clinically recommended doses by day 61 of their follow-up period. Patients on quetiapine had the lowest percentage at 37% (N = 1,057/2,869). Other results were aripiprazole 66%(N = 996/1515), olanzapine 65% (N = 1831/2828), risperidone 73% (N = 2807/3821), and ziprasidone, 47% (N = 522/1,100). When comparing groups of patients with recommended dosing, mental health-related costs ($p = 0.006$) and all-cause costs ($p = 0.0005$) were statistically higher for the quetiapine group compared to the ziprasidone group. **CONCLUSIONS:** Less than two-thirds of the Medicaid patients with schizophrenia who were started on an SGA were taking clinically recommended doses 2 months after their initial start. For patients using clinically recommended doses, those taking quetiapine had higher mental health-related costs and higher all-cause costs compared to patients taking ziprasidone.

PMH31

ASSESSING THE RISK OF HOSPITALIZATION AND ASSOCIATED HEALTH CARE COSTS IN PATIENTS WITH BIPOLAR DISORDER TREATED WITH ATYPICAL ANTIPSYCHOTICS

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OBJECTIVES: To compare the risk of hospitalization and associated inpatient psychiatric treatment costs among patients with bipolar disorder treated with aripiprazole, ziprasidone, olanzapine, quetiapine or risperidone. **METHODS:** A retrospective cohort study using the Pharmetrics Patient-Centric database from January 1, 2003 -September 30, 2008 was conducted. Included patients were aged 18–64 years, diagnosed with bipolar disorder, and newly treated with atypical antipsychotic medications. Patients were followed from treatment initiation to psychiatric hospitalization, medical hospitalization, discontinuation of index medication, loss to follow-up, or one year. Mean length of therapy was similar among the treatment groups. Generalized gamma regression compared inpatient costs between the groups. **RESULTS:** Among 19,176 bipolar patients, those treated with aripiprazole (n = 3,690) had a lower risk of hospitalization during their time on treatment (4.9%) compared to patients receiving ziprasidone (9.2% $p < 0.001$, n = 1515)), olanzapine (7.0% $p < 0.001$, n = 3038)), quetiapine (7.3% $p < 0.001$, n = 7936), and risperidone (7.2% $p < 0.001$, n = 2997). Fewer hospitalizations translated into lower per-patient-per-month psychiatric-related inpatient health care costs for patients receiving aripiprazole ($121) compared to those receiving other atypical antipsychotics (ziprasidone $249 $p < 0.001$, olanzapine ($203 $p < 0.001$), and quetiapine ($182 $p < 0.006$). Differences in hospitalization costs were not statistically significant between aripiprazole and risperidone ($159 $p < 0.354$). Total psychiatric-related health care costs were also significantly lower among aripiprazole patients than patients in each of the other treatment groups ($p < 0.05$). **CONCLUSIONS:** Among patients with bipolar disorder and newly treated with atypical antipsychotic medications, treatment with aripiprazole was associated with a lower risk of psychiatric hospitalization compared to patients receiving other atypical antipsychotic medications and lower psychiatric-related inpatient costs compared to patients receiving ziprasidone, quetiapine, or olanzapine. These data are consistent with previous published findings studying the Ingenix integrated claims dataset. The results of this study suggest that aripiprazole may offer an economic advantage over other atypical antipsychotic medications in this patient population.