the cost is covered by public payers, a sizable proportion (33–37%) of the hospitalizations for bipolar disorder, depression, and substance use disorders are covered by private payers.

MENTAL HEALTH—Patient-Reported Outcomes

PMH46

PREDICTORS OF MEDICATION ADHERENCE AMONG SCHIZOPHRENIA PATIENTS TREATED WITH CONVENTIONAL AND ATYPICAL ANTIPSYCHOTICS IN A LARGE STATE MEDICAID PROGRAM

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OBJECTIVE: This study evaluated antipsychotic use in Medicaid beneficiaries with a schizophrenic disorder and identified factors associated with poor adherence. **METHODS:** This study involved a retrospective cohort analysis of non-dual Florida Medicaid recipients who had a medical claim indicating a schizophrenic disorder (ICD-9-CM 295.XX) and received an antipsychotic (APS) medication between July 1, 2004 and June 30, 2005. Patients were followed for one year after the first APS prescription. Adherence was measured using the Medication Possession Ratio (MPR: defined as unduplicated ambulatory treatment days divided by the number of ambulatory days in the period), medication persistence (days between the first and last antipsychotic in the follow-up period), and number of untreated days. Logistic regression models were used to identify predictors of poor adherence (MPR < 0.80). **RESULTS:** A total of 8828 patients met inclusion criteria. Mean (±SD) age was 42.3 (±13.7) years, 49% were female, and 36.8% were white. Approximately 18% and 39% had pre-existing diagnoses of substance abuse or other psychiatric conditions, respectively. Mean (±SD) MPR was 0.72 (±0.3). The mean number of untreated days was 47.4 (±60.8), and mean persistence was 311.9 (±102.5) days. Approximately 57% of patients had MPR values between 0.8 and 1. Logistic regression indicated that younger patients (<18 years), females, nonwhites, those with a substance abuse diagnosis or who received antidepressants, and those newly starting APS therapy were significantly more likely to be poorly adherent, while those treated with atypical or injectable antipsychotics (vs. conventional orals) were less likely to be poorly adherent. **CONCLUSION:** Several patient characteristics are predictive of poor adherence to APS therapy. Study findings may be informative to health plan administrators interested in identifying patients at risk for medication non-adherence.

PMH47

THE RELATIONSHIP BETWEEN THE ANTIPSYCHOTIC MEDICATION ADHERENCE AND PATIENT OUTCOMES AMONG BIPOLAR DISORDER PATIENTS

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OBJECTIVE: To examine the impact of antipsychotic medication adherence on outcomes among individuals diagnosed with bipolar disorder. **METHODS:** An administrative claims database for a commercially-insured population was used to identify patients with bipolar disorder who were newly initiating treatment with antipsychotics (January 2000–December 2006). Patients were included if they were aged between 18–64 years, had no diagnoses of dementia or schizophrenia, and were continuously insured from 6 months prior through 12 months post-index date (N = 7769). Logistic stepwise regressions examined the association between achievement of adherence goals and patient outcomes (hospitalization or emergency room (ER) visit for any reason, mental-health related hospitalizations or ER visit), while controlling for demographic characteristics, type of bipolar disorder, general health, and comorbidities. Adherence was measured by the medication possession ratio (MPR). **RESULTS:** The mean MPR was 41.65%, with 61.68% of individuals having an MPR of less than 0.50 and 78.67% having an MPR of less than 0.75. A significant reduction in the risk of hospitalization (odds ratio [OR = 0.854]; 95% CI: 0.746–0.978) or an ER visit for any cause (OR = 0.843; 95% CI: 0.744–0.955) was associated with an MPR of 0.75 or more. An MPR of 0.80 or more was associated with a significant reduction in the risk of a mental-health related hospitalization (OR = 0.817; 95% CI: 0.699–0.954) while an MPR of 0.90 or more was associated with a significant reduction in the risk of a mental-health related ER visit (OR = 0.705; 95% CI: 0.544–0.912). Incremental improvements in MPR from 0.75 to 0.95 were associated with corresponding reductions (20 to 30%) in the risk of any hospitalization or ER visit. **CONCLUSION:** As medication adherence improved, risk of hospitalization or ER visit declined, illustrating the link between adherence and better outcomes among patients with bipolar disorder.

PMH48

BETTER PERSISTENCE ON TREATMENT WITH ESCITALOPRAM COMPARED WITH CITALOPRAM

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OBJECTIVE: Guidelines recommend use of antidepressants for a minimum of six months in major depressive disorder in order to decrease the risk of relapse. Persistence on treatment depends both on efficacy and tolerability. In clinical trials, escitalopram has shown a better efficacy and equivalent tolerability compared with citalopram. This work compares persistence on treatment at six months and associated economic consequences, for treatment with escitalopram vs. citalopram. **METHODS:** Using US denominator-based claims database PharMetrics (includes data from 86 managed care health plans covering 45 million patients), we included adult patients diagnosed with depression who started escitalopram or citalopram between January 1, 2003 and December 31, 2004. Six-months persistence was defined as the percentage of patients still on treatment at 6 months. We compared persistence over time using Cox model, and health care costs at 6 months using log-linear regression. Propensity scoring was used to account for channelling by indication. **RESULTS:** A total of 13,227 patients started escitalopram; 3,624 patients started citalopram. Persistence at 6 months was 20.4% with escitalopram vs. 16.2% with citalopram ($p < 0.001$). Escitalopram-treated patients were more likely to be persistent over 6-months than citalopram-treated patients adjusted for their baseline characteristics (HR = 0.896; 95%CI = [0.859–0.934]). More were observed on citalopram than on escitalopram (7.8 vs. 6.2; $p < 0.001$). Total health care costs over 6-months (including treatment cost) were non-significantly lower for escitalopram-treated patients than for citalopram-treated patients (-USD232 per patient; $p = 0.2$). Persisters at 6 months incurred less total health care costs than non-persisters (-USD280 over the 6 months). **CONCLUSION:** Persistence at 6 months is higher on escitalopram than on citalopram, in consistency with its better

efficacy profile. Persistence at 6 months is recommended to maximise chances of sustained remission and to avoid relapse; interestingly these results show that persistence is also associated with decreased health care costs. Efforts should be made to promote persistence on antidepressant treatment.

PMH49

EARLY DISCONTINUATION ON TREATMENT AND ITS CONSEQUENCES IN PATIENTS TREATED WITH VENLAFAXINE OR ESCITALOPRAM

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OBJECTIVE: Two-month head-to-head clinical trials of escitalopram and venlafaxine demonstrated similar efficacy and better tolerability for escitalopram. As routine practice may differ from controlled trial, policy makers wonder how clinical trial findings translate into real life outcomes in community practice. This work compares early treatment discontinuation (ETD) rates at 1 and 2 months and its economic consequences at 6 months, for patients with depression treated with venlafaxine and escitalopram. **METHODS:** Using US denominator-based claims database PharMetrics (includes data from 86 managed care health plans covering 45 million patients), we included adult patients diagnosed with depression who started venlafaxine or escitalopram between January 1, and December 31, 2004. We compared ETD at 1 and 2 months using Cox proportional hazard models and health care costs at 6 months, using log-linear regression. Propensity scoring was used to account for channelling by indication. **RESULTS:** A total of 13,227 patients started escitalopram; 5,922 patients started venlafaxine. ETD at 2 months was 47% for venlafaxine, 45% for escitalopram. At 1 month, venlafaxine patients had a 50% greater risk of ETD than escitalopram patients (Hazard Ratio = 0.493 [95%CI 0.432–0.564]); this difference decreased at 2 months (Hazard Ratio = 0.955 [95%CI 0.912–0.999]). Six-month health care costs were higher with venlafaxine (+USD626, $p < 0,01$). Patients continuing treatment at 2 months had 36% chance of still being on treatment at 6 months. Patients (all treatments) with ETD at 2 months incurred more costs over 6 months (+USD350) compared to patients continuing treatments. **CONCLUSION:** Early treatment discontinuation rate was higher with venlafaxine than escitalopram, possibly due to intolerance to venlafaxine. Absence of ETD was associated with long term persistence and lower total treatment costs.

PMH50

MEDICATION ADHERENCE, ETHNICITY, AND THE INFLUENCE OF MULTIPLE PSYCHOSOCIAL AND FINANCIAL BARRIERS IN VETERANS WITH BIPOLAR DISORDER

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OBJECTIVE: Patients with bipolar disorder are often poorly medication adherent, resulting in deteriorating symptomology, higher admission rates, and diminished quality of life. Many factors are strongly associated with adherence, including financial burdens and multiple psychosocial barriers. However, analyses typically consider these barriers independently rather than conjointly from the patient's perspective. Such approaches neglect the complex interplay of risk factors, many of which are amenable to health policy or clinical interventions. This study evaluates the differential and cumulative impact of nine barriers upon medication adherence. **METHODS:** We recruited 435 patients from the Continuous Improvement for Veterans in Care—Mood Disorders study (FY04–06). Surveys collected information on multiple adherence barriers: medication copayments, foregoing treatment due to cost, binge drinking, access difficulty, social support problems, poor therapeutic alliance, and low medication insight. Multivariable logistic regression modeled adherence as a function of perceived adherence barriers, controlling for demographics, homelessness, and affective symptomology. **RESULTS:** Nearly half of the respondents reported adherence difficulty. Patients experienced an average of 2.8 barriers, with 41% perceiving at least 3. Minority veterans reported poorer adherence than white patients (56% versus 40%, $p = .01$), while claiming more overall barriers, particularly financial burden, binge drinking, and difficulty obtaining psychiatric care when needed. Multivariable models indicated the total number of barriers was significantly associated with poor adherence (OR = 1.24 per barrier). The most significant were low medication insight, binge drinking, and problems accessing care (ORs of 2.41, 1.95 and 1.73, respectively). **CONCLUSION:** Veterans with bipolar disorder experience multiple barriers to medication adherence, a scenario possibly exacerbated by recent copayment increases. Certain psychosocial and financial obstacles proved especially pernicious in connection to worse adherence. Recognizing multiple barriers can assist developing tailored clinical interventions to improve poor adherence by reducing psychosocial risk factors. The interaction with health benefit polices potentially contributes to burdens faced by patients already experiencing adherence problems.

PMH51

A NEW MEASURE OF ADHERENCE—THE DAILY POSSESSION RATIO (DPR): COMPARISONS WITH THE MEDICATION POSSESSION RATIO (MPR) IN THE PRESENCE OF MEDICATION SWITCHING AND THERAPEUTIC DUPLICATION

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OBJECTIVE: The objectives of this study are to describe and define a new adherence measure, the Daily Possession Ratio (DPR), and to contrast that measure with two variants of the Medication Possession Ratio (MPR, truncated MPR). **METHODS:** This study was a retrospective analysis of the North Carolina Medicaid administrative claims data from July 1999 to June 2000. Data for non-HMO, non-hospitalized, non-pregnant schizophrenia patients (ICD-9-CM = 295.**) with at least one antipsychotic were aggregated to the person-quarter level. The daily possession ratio was defined as the number of days one or more antipsychotics was available divided by the total days in the quarter. Adherence rates were also estimated for subjects that switched medications or had therapeutic duplication in the quarter. **RESULTS:** The final sample consisted of 25,200 person-quarters from 7,069 individuals. For person quarters with single antipsychotic use, adherence to antipsychotics as a class was: DPR = 0.607; truncated MPR = 0.640; MPR = 0.695 ($p < 0.0001$). For person quarters with therapeutic duplication, the following adherence measures were observed: DPR = 0.669; truncated MPR = 0.774; MPR = 1.238 ($p < 0.0001$). **CONCLUSION:** The DPR provides a more conservative estimate of adherence than the MPR across all type of users, however the differences between the two methods are more substantial for persons switching therapy and prescribed therapeutic duplica-