a diagnosis of bipolar disorder and received combination therapy with an atypical antipsychotic and a mood stabilizer. A 2-stage sample selection model controlled for differences between individuals receiving antipsychotics and factors that may impact the probability of hospitalization, i.e. demographics, bipolar type, disease severity, comorbidities, mood stabilizer used, and antipsychotic used. RESULTS: Individuals most likely to be hospitalized were those diagnosed as manic or bipolar depressed, or were receiving divalproex sodium or gabapentin. In pair-wise comparisons, hospitalization in the year following the start of combination antipsychotic therapy was 44% less likely for those receiving quetiapine vs olanzapine (P = 0.0354). There was no significant difference in the likelihood of hospitalization for the quetiapine group compared to the risperidone group (P = 0.3826). CONCLUSIONS: In patients with bipolar disorder receiving a mood stabilizer plus an atypical antipsychotic, the probability of hospitalization with quetiapine was significantly lower than with olanzapine, and similar to risperidone. These findings are relevant to prescription choices among atypical antipsychotics, for maximizing patient benefit and minimizing the burden of disease.

**PMHS4**

WORK LOSS ASSOCIATED WITH BIPOLAR DISORDER

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OBJECTIVE: To assess indirect costs of work loss associated with bipolar disorder and major (unipolar) depression. METHOD: From MEDSTAT’s employer-based MarketScan® database for year 2000, workers (mean age 42 ± 9) with a primary ICD9-CM diagnosis of bipolar disorder (N = 740), major depression (N = 6314), and one-to-one matched controls with no psychiatric diagnosis were identified. Work loss parameters were absence hours and payments for short-term disability and worker compensation. RESULTS: Mean annual absence hours were 55 (±49) for the bipolar group vs 21 (±27) for controls (P = 0.0009), and 53 (±154) for the unipolar depression group vs 24 (±48) for controls (P < 0.0001). Mean short-term disability payments were $1231 (±3424) for the bipolar group vs $131 (±967) for controls (P < 0.0001), and $741 (±2873) for the unipolar depression group vs $178 (±1309) for controls (P < 0.0001). Mean worker compensation payments were $554 (±4231) for the bipolar group vs $228 (±2289) for controls (P = 0.15), and $518 (±4814) for the unipolar depression group vs $220 (±2449) for controls (P = 0.0001). CONCLUSIONS: Bipolar disorder and major (unipolar) depression significantly increased work loss. Patients with bipolar disorder may exhaust their sick leave and go onto short-term disability more frequently than those with unipolar depression.

**PMHS5**

CHILD HEALTH ILLNESS PROFILE AS A QUALITY OF LIFE MEASURE OF CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

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OBJECTIVE: The Child Health Illness Profile-Child Edition (CHIP-CE) instrument is a psychometrically sound pediatric quality of life measure that works well in diverse ethnic and racial populations. Although the CHIP-CE has been used in a variety of populations, no known studies have used this instrument to evaluate the quality of life of children with Attention Deficit/Hyperactivity Disorder (ADHD). Our objective was to evaluate the quality of life of children using the CHIP-CE in a population of ADHD patients commonly treated with medications. METHODS: The CHIP-CE is a 76-item, parent-report questionnaire that assesses multiple domains of children’s health-related quality of life including: satisfaction (with self and health), comfort (emotional and physical symptoms and limitations), resilience (positive activities that promote health), risk avoidance (risky behavior that influences future health), and achievement (of social expectations in school and with peers). Standard scores (mean = 50, SD = 10) are established. One hundred thirty people in the United Kingdom (UK) were screened to find 83 eligible parents of children with ADHD to participate in a survey including the CHIP-CE questionnaire and an ADHD symptom frequency measure, the ADHD-RS. RESULTS: The total mean ADHD-RS score (37.2) in the sample was high and comparable to patients in drug trials (the normative non-ADHD score ranges from 7.4 to 12.5). The children of the parents rated had a mean age of 12.6. Seventy-two and three-tenths percent were currently being treated with stimulants and 97.6% were currently receiving therapy of either stimulants or psychotherapy. Children in the sample had considerable impairment in all 5 domains of the CHIP-CE, in particular the risk avoidance (25.2), achievement (29.1), and satisfaction (28.7) domains. CONCLUSION: The CHIP-CE assessment shows significant quality of life impairment in this sample of children with ADHD, despite 70% of the patients being currently treated with stimulant medication.
Abstracts

PMH57
THE EFFECT OF BEHAVIORAL CARVE-OUTS ON PHARMACEUTICAL USE AND EXPENDITURES
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OBJECTIVE: Case studies of behavioral carve-outs using pre/post designs have found that they result in substantial savings. Prior studies have not, however, examined the impact of behavioral carve-outs on psychotropic medication usage and costs. This study fills this gap. METHODS: Data came from Medstat’s MarketScan claims database. The sample comprised ten large employers with and without behavioral carve-outs. The employers included about 1.4 million employees and their dependents (about 890,000 were enrolled in carve-outs and 521,000 in non-carve-outs). A 2-part model was used to examine differences in the probably of use and the cost of services among users. RESULTS: There was no difference in the probability of using pharmaceuticals or the costs of pharmaceuticals among users between carve-outs and non-carve-outs; although, predicted pharmaceutical expenditures were lower for carve-outs ($4.80 versus $3.90). Carve-outs had a lower probability of using inpatient care and outpatient care. Carve-outs had higher costs for outpatient care among users. The other differences were not statistically significant. Total predicted costs for carve-outs were about 28% lower than for non-carve-outs. CONCLUSIONS: Behavioral carve-outs have an incentive to shift usage away from mental health ambulatory and hospital services and towards pharmaceuticals because pharmaceutical usage is typically off the budget for which they are held accountable. However, without very aggressive utilization review, behavioral carve-outs may not have the tools to influence pharmaceutical usage. This study finds that the main effect of behavioral carve-outs is on the probably of inpatient and outpatient behavioral health service usage.

PMH58
THE RELATIONSHIP BETWEEN MENTAL DISTRESS, HEALTH RISKS AND HEALTH CARE COSTS FROM THE MANAGED CARE HEALTH RISK ASSESSMENT DATABASE
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OBJECTIVES: The association between mental distress and health risks, protective health behavior (in the form of preventive health screenings) and health care costs was evaluated among a commercially insured, adult population. METHODS: The sample contains 10,055 employees age 18–75, which is a sub-set of the managed care, health risk assessment database [MCHRA]. The MCHRA data was collected from 2000–2003. Bi-variable analysis, logistic regression and general linear regression models were performed to evaluate the association between mental distress (low, medium and high) and health risks, health lifestyle, preventive health screenings, and health care costs. RESULTS: Using multi-variable logistic regression models, those with high mental distress were significantly more likely to smoke (adjusted odds ratio [AOR] 1.26, p = 0.0027), drink alcohol (AOR 5.75, p < 0.0001), more likely to not wear a helmet when biking (AOR, 1.37, p = 0.0188), more likely to be overweight (AOR 1.21, p = 0.0350), more likely to feel a loss of self esteem (AOR 8.86, p < 0.0001), more likely to have lost interest in life (AOR 12.23, p < 0.0001), more likely to report depression (AOR 16.53, p < 0.0001), more likely to have sleep problems (AOR, 3.81, p < .0001) and less likely to be tested for colon cancer through FOBT tests (AOR 1.429, p = .0006) or colonoscopy (AOR 1.95, p < 0.0001). Those with mental distress were more likely to have higher health care costs overall ($51,700; F = 20.08, p < 0.0001). Health care cost areas associated with disease classifications showed those with higher distress had higher costs related to treatment of mental disorders ($140; F = 44.50, p < 0.0001), the nervous system ($70; F = 3.34, p = 0.0675) and respiratory system ($120; F = 15.36, p < 0.0001). CONCLUSIONS: The findings indicate a strong association between mental distress, health risk and lifestyle, and preventive health behavior and health care costs.

PMH59
ANTIPSYCHOTIC ADHERENCE AMONG CENTRAL TEXAS VETERANS
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OBJECTIVES: Unlike many other health care organizations, central Texas veterans do not have day supply limits on medications. Thus, the potential for medication over-adherence exists. The objectives of this study were to: 1) examine the adherence rate (AR) and medication possession ratio (MPR) among veterans taking antipsychotics; 2) determine whether over-adherence (AR > 1 or MPR > 1) exists among veterans taking antipsychotics; and 3) evaluate factors related to over-adherence. METHODS: Data were extracted from the Central Texas Veterans Health Care System (CTVHCS) from September 1995—October 2002 for continuously enrolled adult outpatients who were on monotherapy, and had at least two prescriptions within a year. Demographic and relevant clinical information, including age, gender, ethnicity, psychiatric diagnoses, and antipsychotic prescription medication information were collected. Subjects were followed up to 12 months. RESULTS: Among the eligible patients (N = 3252), the mean AR was 1.56 (sd = 2.58) and MPR was 1.23 (sd = 0.75). Over one-half (54.4%) of the subjects were over-adherent with ARs and MPRs > 1. For those over-adherent patients, the mean AR was 2.38 (sd = 3.27) and MPR was 1.70 (sd = 0.71). Multiple logistic analyses revealed that schizophrenic patients (OR = 1.241, p = 0.0085) were significantly more likely to be over-adherent (MPR > 1), while nonwhite (OR = 0.617, p < 0.0001), depressed patients (OR = 0.801, p = 0.0085) and atypical users (OR = 0.620, p < 0.0001) were significantly less likely to be over-adherent. A second logistic analysis to assess individual antipsychotic agents showed that, compared to haloperidol, quetiapine users (OR = 2.309, p = 0.0073) were significantly more likely to be over-adherent, and olanzapine (OR