underwent 3.6 distinct medication regimens each with, on average, having 2 drugs. Poly-pharmacy (multiple drug combinations) treatments represent 60% of the days of treatment and a disproportionate 82% share of costs. Average paid cost per day of treatment for those using poly-pharmacy is $7.56, whereas monotherapy is $2.47. Twenty-three percent of patients are treated with poly-pharmacy initially and permanently. Antipsychotics and benzodiazapine-based treatments are most commonly seen (80%) in poly-pharmacy treatments. Increasing severity of illness is related to increased poly-pharmacy, with the exception of those patients in remission. CONCLUSION: Pharmacologic treatment of bipolar is challenging, individualized and characterized by poly-pharmacy, reflecting the cyclical nature of the disorder. The impact of the complexity of treating bipolar needs to be studied to determine how service utilization and costs are influenced.

PMH71
WHEN BIPOLAR DISORDER IS BEING IDENTIFIED: PHASE OF DISORDER, PROVIDER SPECIALTY, FACILITY TYPE, AND RESOURCE UTILIZATION SURROUNDING THE INITIAL BIPOLAR DIAGNOSIS IN CLINICAL PRACTICE
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OBJECTIVE: In part because of its cyclical nature, bipolar disorder is frequently missed or misdiagnosed in clinical practice. Over one third of bipolar patients report a period of 10+ years between initially seeking treatment and proper diagnosis. Understanding when and where bipolar disorder is being diagnosed represents an important step for targeting efforts to improve the accurate identification of bipolar patients. METHODS: To examine characteristics of initial bipolar diagnosis, the Pharmetrics Integrated Outcomes Database of adjudicated medical and pharmaceutical claims for over 3 million patients from 11 U.S. health plans was utilized. We identified 3,648 bipolar patients based on the following criteria: two claims with ICD-9-CM diagnosis for bipolar disorder (296.0, 296.1, 296.4–296.8) that were not accompanied by a unipolar depression or schizophrenia claim on the same day, age between 10 and 64, and 1 year of continuous eligibility prior to and following the initial bipolar diagnosis. RESULTS: Of the 3648 patients, 1859 (51%) had sufficient diagnostic information to identify the current phase of the disorder. Of these 1859 patients, 69% were diagnosed during either a manic or mixed episode. Most frequently the diagnostic claim was associated with a mental health specialist (64%), with only 7% being associated with a family or general practitioner. The majority of index diagnoses were at outpatient visits (75%), followed by inpatient hospitals (15%), and Emergency Rooms (2%). On average, patients incurred $9241 in paid claims per year, of which $2610 (28%) occurred in the 2 weeks before and after the bipolar index date. During this month surrounding initial diagnosis, hospitalizations accounted for 72% of the costs. CONCLUSIONS: Bipolar disorder appears to be most commonly diagnosed at outpatient visits by mental health specialists when symptoms of mania are present. Earlier recognition and treatment may reduce the spike in costs that surrounds the initial diagnosis.

PMH72
MEDICATION PRESCRIBING PATTERNS FOR PATIENTS WITH BIPOLAR DEPRESSION
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OBJECTIVE: To examine managed-care prescribing patterns for patients beginning pharmacologic treatment in the depressive phase of bipolar. METHODS: This retrospective study (1995–2002) included a cohort of 1203 patients who had 3 consecutive years of data, received an ICD coded diagnosis of bipolar depression and received one of four classes of psychotropic medication (i.e. antidepressant, antipsychotic, benzodiazapine, or mood stabilizer). Treatment patterns were observed for a one-year period post diagnosis. RESULTS: Seventy-seven percent of extracted data was between 1999–2002. Fifty-five different medications were used to create multiple unique mono and/or combination pharmacologic treatments. Nine percent of patients began their treatment in accordance with APA guidelines, whereas, 16% began treatment using only an antidepressant. As switches in treatment occur, use of mono-therapy treatments decrease (~12%) and use of four or more medication combinations increase (+9%). One third of patients were treated with four or more medications in combination, at some point, during the year following diagnosis. CONCLUSION: Pharmacologic treatment of bipolar depression is characterized by polypharmacy, reflecting the complexity of the disorder; and is often not aligned with guidelines. There is a need to study how these patterns impact service utilization and costs, as well as to further understand the treatment patterns.

MENTAL HEALTH
MENTAL HEALTH—Methods

PMH73
DEPRESSION IN THE GENERAL POPULATION AND AFTER STROKE: A PSYCHOMETRIC COMPARISON USING THE CES-D SCALE
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OBJECTIVES: To assess the construct validity and reliability of the Center for Epidemiologic Studies Depression (CES-D) scale in stroke patients, and to examine item functioning in depressed stroke patients compared to generalized depression. METHODS: Psychometric analyses were conducted on secondary data sources, including 101 patients 3, months post-stroke (of whom 32 were depressed), and 366 individuals with depression from the US general population. Presence of (potential) depression was based on a CES-D score ≥16. Convergent validity of the CES-D scale in stroke patients was assessed with concurrently administered measures—the SF-36 mental health subscale (MH), and the Health Utilities Index Mark 2 and 3 single attribute utility score for emotion (HUI2-E, HUI3-E, respectively)—using Spearman’s rank correlation coefficients (r). Internal consistency reliability was assessed using Cronbach’s a. Rasch analysis was used to compare item hierarchies and to identify differential item functioning (DIF) between generalized depression and depression after stroke. RESULTS: The CES-D was strongly correlated with the MH subscale (r = −0.81), HUI2-E (r = −0.71) and HUI3-E (r = −0.66). Internal consistency reliability of the CES-D scale in stroke patients was satisfactory (Cronbach’s a = 0.90). Rasch analysis identified several items that were redundant or did not contribute to scale consistency. Item hierarchies separated into similar strata of difficulty for depressed stroke patients and generalized depression, with interpersonal disruption items (people unfriendly, feeling disliked) being the most difficult to endorse in both samples. DIF between generalized depression and stroke was identified on items relating to appetite, restless sleep, crying, and feeling disliked. CON-
COMPARING PSYCHOMETRIC PROPERTIES OF SELF-VERSUS INTERVIEWER-RATED INSTRUMENTS USED IN CLINICAL TRIALS FOR PATIENTS WITH ANXIETY DISORDERS

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Clinical trials often employ self-rated and interviewer-rated instruments to assess the effectiveness of anxiolytic treatments. Understanding potential differences in these scales and their psychometric properties therefore is important for interpreting trial results. OBJECTIVES: Identify and critique key methods used to compare psychometric properties of self-versus interviewer-rated instruments in clinical trials for patients with anxiety disorders. METHODS: A literature review focusing on anxiety outcome assessments used in clinical trials was conducted in Medline, OLGA, and PsychINFO databases of articles published before September 2003. This study included only articles that were published in English and reported data from clinical trials with anxiolytic drugs. RESULTS: From the literature review, two commonly used instruments included the self-rated Symptom Checklist-90, and the interviewer-rated Hamilton Rating Scale for Anxiety. Five methodological approaches were identified: 1) precision of measurement: means and variances of instrument scores; 2) construct validity: comparison of underlying constructs for each instrument using factor analysis; 3) internal consistency: homogeneity of items within the same domain of an instrument; 4) instrument sensitivity: ability of the instrument to detect treatment effect by differentiating control from treatment groups or between groups of different disease states; and 5) instrument responsiveness: ability of each instrument to detect minimal clinically important changes within patients over time (pre-and post-treatment phases) using distribution-based and anchor-based approaches. Tests for statistical and clinical significances in score changes are discussed. For each of the five approaches, suggested statistical methods and examples from the literature are presented. CONCLUSIONS: The structured taxonomy developed in this study will help interpret clinical trial results that use self-rated and interviewer-rated instruments, as well as elucidate potential methods for developing and validating new instruments to assess the effectiveness of anxiolytic treatments in trials.

A COMPREHENSIVE RETROSPECTIVE STUDY OF ASSOCIATIONS BETWEEN DIABETES AND TREATMENT WITH RISPERIDONE, OLANZAPINE, QUETIAPINE, AND CONVENTIONAL ANTI-PSYCHOTICS

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OBJECTIVES: The potential for antipsychotic-induced diabetes is an important issue. Retrospective studies using large patient databases have had conflicting findings regarding diabetes risks associated with different antipsychotics. METHODS: Claims data for thousands of psychosis patients treated or untreated with antipsychotics were analyzed. Screening for preexisting diabetes, identification of diabetes with prescription claims only, and requirement of antipsychotic monotherapy provide better control for confounding influences and represent a stronger study design. Diabetes odds ratios for risperidone, olanzapine, quetiapine, or conventional antipsychotics versus non-treatment were estimated for all patients and for patients stratified by dose levels. Logistic regression controlled for age, sex, type of psychosis, length of observation/treatment, preexisting excess weight, and use of other drugs with diabetogenic effects. RESULTS: Under a weaker study design, all of the antipsychotics were associated with significantly higher odds of diabetes relative to non-treatment. Odds ratios (95% confidence intervals [CI]) were: risperidone 1.388 (1.276–1.509), olanzapine 1.331 (1.224–1.446), quetiapine 1.394 (1.247–1.559), and conventional antipsychotics 1.365 (1.239–1.503). Under a stronger study design, relative odds for risperidone and quetiapine declined, becoming statistically insignificant, whereas odds for olanzapine and conventional antipsychotics increased. Odds ratios (95% CI) were: risperidone 1.224 (0.962–1.562), olanzapine 1.858 (1.549–2.238), quetiapine 1.087 (0.742–1.612), and conventional antipsychotics 1.755 (1.381–2.221). With quetiapine, odds of diabetes were not significantly increased at any dose level relative to non-treatment. Odds were significantly increased...