Abstracts

BENCHMARKING SCHIZOPHRENIA WITH A FOCUS ON PHARMACOTHERAPY AND METABOLIC SYNDROME
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OBJECTIVE: The objectives of this analysis were to: Identify a population of schizophrenia patients treated within a commercial managed care environment. Describe and compare the prevalence of conditions associated with metabolic syndrome in patients treated with antipsychotics agents. METHODS: Using integrated medical and pharmacy claims data (obtained from the IMS/Pharmetrics Patient-centric Database), patients were included in this analysis based on the presence of a diagnosis of schizophrenia (ICD-9 code 295.*) in 2005. Clinical and economic information related to the treatment of schizophrenia were captured using Episode Treatment Group™ (ETG™) episode-building software. RESULTS: In 2005, 8594 schizophrenia patients were identified; within this population, the average age was 45.7 years and 46% was male. Co-morbid conditions included bipolar disorders (in 23.7% of patients), anxiety disorder (12.7%), substance dependence (11.7%), and depression (7.9%). Overall (among the entire identified patient population), 75.6% of patients used antipsychotics; 57.4% used only atypical agents, 9.1% used only conventional agents and 9.1% used both. Overall, 48.6% of patients had at least one of the following conditions, considered markers for metabolic syndrome: diabetes, hyperlipidemia, hypertension, or obesity. Among patients treated with antipsychotics, prevalence of these conditions was lowest in those treated only with atypical agents (46.5% with at least one condition), higher in patients treated only with conventional agents (55.5% with at least one condition), and highest in patients with use of both classes of antipsychotic agents. CONCLUSION: The schizophrenia population observed in this analysis reflected a lower prevalence of presumed metabolic syndrome in groups treated with atypical antipsychotic agents. This observation contradicts other research. This disparity may be attributable to differences in patient demographics or other confounding factors, but nonetheless warrants further study.

STATISTICAL ANALYSIS OF SIGNIFICANT VARIABLES IN DEALING WITH DRUG ABUSE INPATIENTS
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OBJECTIVE: To examine a sample of patients admitted to hospitals with drug abuse for some inpatient treatment in order to look for trends that may lead to a better understanding of the data and of which groups seem to be most at risk for this ailment. METHODS: Data were taken from a ten percent sample of the National Inpatient Sample from 2004. A data sample of 7903 inpatients from 2004 was organized, plotted, graphed, and put into tables in order to best understand the patterns and variances. Logistic regression models were created to compare variables and help to predict age and mortality of the inpatients. The data were preprocessed to include only the most frequently occurring diagnosis and procedure codes. RESULTS: Frequency of cases of drug abuse showed spikes near the ages of 40 and 80, with the African Americans and males dominant at the 40 spike and the Caucasians and males at the 80 spike. Code variables for rehabilitation, blood transfusion, respiratory intubation, hypertension, heart disease, congestive heart failure, urinary tract infection, cardiac dysrhythmias, pulmonary disease, fluid disorder, CT head scan, gastrointestinal endoscopy, psychiatric therapy, physical

MENTAL HEALTH—Clinical Outcomes Studies

ESTIMATING THE MAGNITUDE OF ORAL ANTIPSYCHOTIC DRUG-DRUG INTERACTIONS
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OBJECTIVE: To estimate the number of patients with potential major, moderate or minor drug-drug interactions (DDI) between oral antipsychotics and coprescribed drugs within a managed care population (MCP). METHODS: Literature and drug information resources were used to identify and classify clinical severity of potential antipsychotic DDIs based on cytochrome P450 metabolism of antipsychotics and coprescribed drugs. PHARMetrics pharmacy claims for one year (June 2004 – July 2005) from individuals with antipsychotic claims (including oral risperidone, olanzapine, quetiapine, ziprasidone, aripiprazole, clozapine, oral haloperidol and perphenazine) were evaluated. Patients with ≥10 days of overlap with a potentially interacting drug of severity grade 1 (major), 2 (moderate) or 4 (major/moderate) were identified. Drug Facts & Comparisons severity grading scale was used to determine drugs that met these criteria. Results were extrapolated to provide a population-based prediction of the risk for potential DDIs. Recent national market-share (MS) data (IMS prescription audit 4Q06) for each antipsychotic were multiplied by the percentage of potential projected interactions to determine the number of patients at risk for DDIs in a cohort of 10,000 patients prescribed antipsychotics. RESULTS: Of the 73,562 patients who met study inclusion criteria, 8551 (11.6%) patients had at least one potential DDI of severity grade 1, 2 or 4. Depending on the antipsychotic dispensed, percentage of potential DDIs ranged from 0% to 26.8%. Applied to a cohort of 10,000 patients, over 1162 (11.6%) patients could potentially experience a grade 1, 2 or 4 DDI. Oral risperidone (26.8% MS) had the highest potential for DDIs (n = 676) and quetiapine (30.4% MS) had the second highest potential for DDIs (n = 137). Ziprasidone (5.7% MS) had no potential P450 DDI interactions of severity grade 1, 2 or 4. CONCLUSION: Prevalence of potentially serious DDIs due to interactions with cytochrome P450 metabolic activity is high in patients being treated with antipsychotics.
therapy, and various mental disorders were combined with these results to create a model that is almost 80 percent accurate. Mortality can be predicted using the variables vascular catheterization, respiratory intubation, and coronary atherosclerosis with an accuracy of 63.4 percent. CONCLUSION: A bimodal trend in the age of drug abusers suggests two different types of drug abuse. The most likely explanation is the abuse of recreational drugs around the age of 40 and the abuse or misuse of prescription drugs around the age of 80. Mortality can be predicted so accurately using only three variables because these procedures are associated with the highest probability of death.

ATYPICAL ANTIPSYCHOTIC MEDICATIONS IN THE TREATMENT OF SCHIZOPHRENIA: A BAYESIAN META-ANALYSIS OF DIRECT AND INDIRECT COMPARISONS

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OBJECTIVE: The purpose of this study was to evaluate the relative efficacy of different atypical antipsychotic medications (AAPs) in the treatment of schizophrenia using a Bayesian mixed treatment comparison (MTC) model. METHODS: The Cochran central register of controlled trials and PubMed database were searched to identify randomized controlled clinical trials assessing the efficacy of AAPs (olanzapine, risperidone, clozapine, aripiprazole,quetiapine, ziprasidone) in the treatment of schizophrenia. Studies were included if they used change in the Positive and Negative Syndrome Scale (PANSS) as an outcome measure. Findings from these studies were analyzed using Bayesian meta-analysis of direct and indirect comparisons. Both, fixed and random effects models were employed in the analysis. RESULTS: Twenty eight trials were identified, which included a total of 6023 patients. The fixed effects model indicated that clozapine and olanzapine had significantly greater improvements on the PANSS overall scale (median change from baseline: 19.4 (95% credible interval [CrI] 19.2–19.5) and 19.3 (95% [CrI] 19.3–19.4) for clozapine and olanzapine respectively) than all other AAPs. In the rank order analysis, clozapine had a 82% probability of being the best treatment. Clozapine showed significantly more improvements on the positive subscale (mean change from baseline 5.4 (95% [CrI] 5.2–5.5), and 100% probability of being the best treatment). On the negative subscale, clozapine and olanzapine respectively) than all other AAPs. In the rank order analysis, clozapine had a 82% probabil-

OPTIMAL THRESHOLDS OF EARLY NON-RESPONSE TO ATYPICAL ANTIPSYCHOTICS: APPLICATION OF SIGNAL DETECTION ANALYSIS

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OBJECTIVE: This study used signal detection methods to identify the optimal magnitude of early non-response to antipsychotic medication at various early time points that best predicts subsequent non-response at eight weeks, using different criteria of subsequent non-response. This analysis was implemented separately for schizophrenia patients with at least moderate symptom severity, and for patients with lesser symptom severity. METHODS: Data were pooled from five randomized, double-blind clinical trials of atypical antipsychotics in the treatment of patients with schizophrenia, schizoaffective disorder, or schizoaffective disorder, and included 1437 patients (n = 1137 with at least moderate symptom severity; n = 300 with lesser symptom severity). Signal detection methods were used to identify the optimal response threshold based on improvement from baseline on the Positive and Negative Syndrome Scale (PANSS) total score at different early time points (Week 1 to Week 4 of treatment) to predict subsequent non-response at eight weeks, while controlling the false positive rate at 30% or less. RESULTS: The optimal thresholds for patients with at least moderate symptom severity were 7–12% at Week 1, 14–23% at Week 2, 20–38% at Week 3, and 26–45% at Week 4. For patients with lesser symptom severity, the optimal thresholds were 3–4% at Week 1, 7–12% at Week 2, 6–14% at Week 3, and 15–20% at Week 4. Results were validated using data from another clinical trial. CONCLUSION: Different early response thresholds appear to maximize identification of subsequent non-responders to antipsychotic medica-