z-scores and odds of ≥0.5 change in baseline to follow-up z-scores were estimated. RESULTS: A total of 1179 eligible patients were identified with mean age 15.2 years (SD, 2.16) and 51% female. The distribution was: FGA’s 19% (n = 253), aripiprazole 11% (n = 129), olanzapine 15% (n = 182), quetiapine 25% (n = 297), risperidone 26% (n = 308), and ziprasidone 3% (n = 32). In the linear model, adolescents on olanzapine experienced a significant increase in BMI [0.84 kg/m² (CI, 0.17–1.52)] compared to those on aripiprazole. Logistic model results indicated a significant likelihood of a 5 to 20% increase in BMI for those on olanzapine [OR: 1.54 (CI, 0.96–2.5) to 4.53 (CI, 1.79–11.48) and a 10 to 20% increase for those on risperidone [OR: 1.84 (CI, 1.15–3.0) to 2.18 (CI, 1.21–3.96)], compared to aripiprazole. In the BMI z-score analysis, adolescents on olanzapine experienced a significant increase in BMI [OR: 1.63 (CI, 1.02–2.67)]. Results for FGA’s, quetiapine, and ziprasidone were not statistically significant.

CONCLUSION: Potential for weight gain varies by antipsychotics and should be taken into account while prescribing these medications to adolescents.

**MH2**

**ECONOMIC AND CLINICAL CONSEQUENCES ASSOCIATED WITH POTENTIAL DRUG-DRUG INTERACTIONS BETWEEN ANTIPSYCHOTICS AND CONCOMITANT MEDICATIONS IN PATIENTS WITH SCHIZOPHRENIA**

Guo JJ1, Kelton CM1, Patel NC1, Wu JH2, Jing Y1, Fan H2, Keck P1

1University of Cincinnati, Cincinnati, OH, USA, 2Ortho-McNeil Janssen Scientific Affairs, LLC, Titusville, NJ, USA, 3Covance Inc, Sun Prairie, WI, USA

OBJECTIVE: Inhibiting or inducing antipsychotic metabolism via the hepatic cytochrome P450 (CYP450) may have clinical and economic consequences. This study examined whether drug-drug interactions (DDIs) between oral antipsychotics and non-antipsychotic concomitant medications that are inhibitors or inducers of CYP450 isoenzymes are associated with increased health care utilization and costs in schizophrenics or schizophrenia-disorder patients.

METHODS: Ohio State Medicaid data contributed patients (18 ≤ age ≤ 65) who had schizophrenia or schizoaffective disorder and received an antipsychotic from 2000 to 2003 (N = 31,716). Clinically significant DDI pairings (Facts & Comparisons 4.0) were examined, with concomitant exposure for an antipsychotic prescription overlapping with an interacting medication. Three adverse events (AEs) (extrapyramidal symptoms, increased seizure risk and QT-prolongation or arrhythmias) associated with DDIs were studied. Utilization and costs for inpatient and ambulatory care during a 90-day follow-up were examined. Regression analyses were used to adjust for confounding factors between patient groups.

RESULTS: Most patients had non-DDI (26.546); 7060 had a DDI (no AE) and 110 experienced DDI + AE. Length of stay and emergency room visits (mean ± SD) were highest for DDI + AE (25 days ± 17.8; 3.4 ± 4.1) and lower for the DDI (11 days ± 9.9; 1.5 ± 1.0) and non-DDI (3.6 days ± 15.6; 0.5 ± 2.8) groups. Health care costs were higher with DDI + AE ($9699) or DDI ($2962) compared with non-DDI ($2201). Regression analysis indicated that patients with DDI + AE or DDI had significantly higher health care utilization and costs than patients without DDI (P < 0.001). Stepwise regression showed that patients with a DDI or DDI + AE associated with olanzapine, risperidone and quetiapine had higher total costs than patients without a DDI. CONCLUSION: These data suggest that antipsychotic DDIs are related to higher health care utilization and costs. Efforts to avoid potential DDIs associated with some antipsychotics are critical for clinical practitioners to prevent costly clinical and economic consequences.

**MH3**

**WORK ABSENTEEISM AND BED DAYS IN CHRONIC MEDICAL DISORDER PATIENTS WITH AND WITHOUT DEPRESSION IN THE UNITED STATES, 2004–2005**

Sankaranarayanan J, Smith LM, Meza J, Burke WJ

University of Nebraska Medical Center, Omaha, NE, USA

OBJECTIVE: Study of depression on disability days and work absenteeism in patients with chronic medical disorders (CMDs) is limited. Our objective was to compare annual bed days and missed workdays in CMD patients with and without depression.

METHODS: For retrospective analysis, we extracted data on >≥18 year-old employed adults from the pooled 2004–5 Medical Expenditure Panel Survey. Data included ICD-9-CM-coded CMD (hyperlipidemia, heart-disease, arthritis/other joint disorders, chronic obstructive pulmonary disease, hypertension, diabetes), and depression; number of missed workdays and bed days, age, gender, race, poverty level, health insurance, health status (physical, mental), urban residence, and any depression treatment (psychotherapy/antidepressant). For 6786 CMD patients with and without depression, we compared rates with one or more missed workdays and bed days, and mean number of missed workdays and bed days. Weighted sample estimates and 95 percent confidence limits (CL) were calculated using the Taylor expansion method. In multivariate logistic regression models, after controlling for other characteristics, we examined association of depression with one or more missed workdays and one or more bed days. RESULTS: Compared with those without depression, significantly more CMD patients with depression reported one or more missed workdays [50.26% (SE0.86%) vs. 70.14% (SE2.11%) p < 0.001], and one or more bed days [18.51% (SE0.66%) vs. 34.24% (SE2.2%), p < 0.001]. The mean number of missed workdays (9.93+/−0.94 vs. 5.01+/−0.22) and bed days (4.29+/−0.62 vs. 1.03+/−0.08) were also higher in CMD with versus without depression. In multivariate analyses, after controlling for other characteristics including any depression treatment, depression increased the likelihood of one or more missed workdays (adj ODDS-Ratio, OR 1.41, 95% CL:1.14–1.75, p = 0.002) and one or more bed days (OR 1.37, 95% CL:1.07–1.75, p = 0.013) in CMD patients.

CONCLUSION: Depression plays a significant role in both absenteeism and bed days in CMD patients in the United States. Effective identification and treatment strategies require the attention of both providers and payers.

**MH4**

**TREATMENT COST AND COMORBIDITIES ASSOCIATED WITH OBESITY AMONG CHILDREN AND ADOLESCENTS WITH Bipolar DISORDER**

Guo JJ1, Kelton CM1, Jing Y1, Patel NC2

1University of Cincinnati, Cincinnati, OH, USA, 2University of Georgia, Augusta, GA, USA

OBJECTIVE: Childhood obesity as a known risk factor associated with bipolar disorder complicates its treatment. The purpose of this study is to assess treatment costs and comorbidities associated with obesity in children and adolescents with bipolar disorder.

METHODS: Based on a multi-state managed care medical claims database (PharMetrics), a total of 9895 children and adolescents (6 < age < 19) who had been diagnosed and received medication treatment for bipolar disorder during the period January 1, 1998 to December 31, 2002 were selected for this study. Annual treatment cost per patient was constructed as the sum of reimbursed amounts (in 2002 constant dollars) for hospitalizations, outpatient care, emergency room (ER) visits, physician encounters, laboratory tests, drugs, and other medical services. A stepwise log-linear regression analysis was used to
assess the factors influencing annual treatment costs. Logistic regression analysis was conducted to assess the association between obesity and related clinical factors. RESULTS: A total of 341 (3.4%) children or adolescents received an obesity diagnosis during the study period. The average annual treatment costs were $7481 (SD ± 8371) for patients experiencing obesity and $5364 (SD ± 15,322) otherwise. A total of 4204 (42.5%) patients received atypical antipsychotics, 2237 (22.6%) with lithium, and 5890 (59.5%) with other anticonvulsants. Being obesity is associated with atypical antipsychotic use (odds ratio [OR] = 1.49, 95% confidence interval [CI] 1.18–1.88), and key comorbidities like diabetes mellitus (OR = 3.40, 95% CI 1.96–5.89) and hypertension (OR = 4.41, 95% CI 2.70–7.20). Higher treatment cost is associated with the use of atypical antipsychotics (p < 0.0001), hospitalization (p < 0.0001), ER visit (p < 0.0001), and some key comorbidities like diabetes mellitus (p < 0.0001) and substance abuse disorder (p < 0.0001). CONCLUSION: Higher treatment costs are associated with obesity in children or adolescents with bipolar disorder. Metabolic complications should be considered by clinical practitioners when prescribing medication in this population.

PODIUM SESSION II

HEALTH CARE DECISION-MAKER’S CASE STUDIES II

CASE 4

THE IMPACT OF THE PROJECT OF ENHANCING COVERAGE RATE FOR PATIENTS WITH CANCER

Lee SM, Nam MH, Yoon SH, Kim BY, Choi MR, Cho HS, Lee KD
Health Insurance Review & Assessment Services, Seoul, South Korea

Problem or Issue Addressed: Policy makers of Korean government decided to increase the rate of public expenditure on health per total expenditure on health (coverage rate) in the patients with cancer. There had been conflicts between health care providers and decision makers of health insurance in the use of off-label anticancer drug.

Goals: (1) Stepped increase coverage rate of the patients with cancer; (2) Rational control of off-label drug use related to treatment of cancer including chemotherapeutic drugs and drugs for cancer pain; (3) To control the reimbursement for the patients with cancer in the limited budget allocation.

Outcomes items used in the decision: Safety and effectiveness data from the literature and cost of drug.

Implementation Strategy: A project to enhance coverage rate of treatment of cancer started in September, 2005. The project consists of the registry of the patients with cancer, and the special committee for review of drugs related to treatment of cancer. The handouts for the meetings have been made according to the ‘evidence based review manual’ which had been made by evidence based health care team of HIRA. It is systematic approach to retrieve information related to the safety and effectiveness about the drugs. The rate of the patient’s payment per benefit schedule is reduced from 20% to 10%.

Results: The total number of patients whose medical fees were claimed by health care provider was 42.8 million in 2005 and it was 43.4 million in 2006 increased by 1.4%. The total number of patients with cancer among them was 670 thousands in 2005 and it was 710 thousands in 2006, increased by 6.0%. The rate of public expenditure on health per total expenditure on health in the patients with cancer increased from 49.6% to 71.0%. The rate of patients taken with anticancer chemotherapy increased from 5.9% to 7.9%. The expected allocated budget was $97 million $ and the actual spending money was $24 million $.

Lessons Learned: The project was performed successfully by evidence based decision making process and reasonable use of off label drug use.

CASE 5

THE CENTER FOR DRUG POLICY: PARTNERS HEALTHCARE

Reddy P, Yeh Y, Clapp M, Churchill W
Partners Healthcare, Charlestown, MA, USA; Massachusetts General Hospital, Boston, MA, USA; Brigham and Women’s Hospital, Boston, MA, USA.
Organization: Center for Drug Policy, Partners Healthcare.

Problem or Issue Addressed: The Pharmacy Cost Management Committee of the Partners Healthcare System (PHS), a consortium of seven greater Boston area hospitals, has recognized the need to control the future growth rate of pharmaceuticals by managing the utilization of new, high cost pharmaceutical technologies and learning from best practices across the network and country. The Center for Drug Policy (CDP) was established in August 2007 to provide the analytical resources to support the Pharmacy Directors and multidisciplinary teams of physician and pharmacist content experts in this endeavor.

Goals: The major objectives of the CDP are to forecast and manage the introduction of new, high cost pharmaceutical technologies and to streamline the development and implementation of common guidelines across the network. Additional objectives of the CDP are to 1) identify and coordinate cost savings opportunities, 2) conduct prospective utilization reviews and assess, 3) share best practices across the network, and 4) benchmark against high performance organizations nationwide.

Outcomes items used in the decision: Both process and outcome-related measures will be measured. For process-related measures, the number of the following outputs and select intermediate steps will be assessed quarterly: guidelines (drug/therapeutic class/disease), budget-impact models, guideline dissemination and implementation, and assessment of guideline impact. Outcome-related measures will be assessed at a global level and a project-specific level. At the global level, annual drug purchases, drug cost/case-mix adjusted discharge, and drug cost/case-mix adjusted patient day will be measured quarterly at each hospital. At a project-specific level, outcomes will depend on the pharmaceutical technology but would include clinical (e.g., adherence to guidelines, time to event, complications, etc.) and economic measures (e.g., volume of drug, length of stay, drug purchases, etc.).

Implementation Strategy: To establish the CDP, the CDP leadership met with key stakeholders across the network of hospitals, undertook a targeted literature review of cost management strategies in the hospital setting, and conducted an on-site visit to another hospital’s CDP. Access to and training on key data resources including drug purchasing data, computerized physician order entry, and cost accounting systems was obtained. A database to track emerging drug therapies and tools to assist in project management were created. Internal processes and tools were developed to ensure quality, consistency, and documentation of guideline development. To facilitate sharing best practices across the hospital network, presentation opportunities have been provided at monthly CDP meetings; in addition, a monthly memo summarizing key Pharmacy & Therapeutics Committees activities across the network has been prepared and distributed to Pharmacy leadership. Templates for ongoing internal reporting were also developed.

Results: As the CDP was established in August 2007, data collection is ongoing; an overview of anticipated results is, however,