based on primary ICD-9-CM discharge diagnosis of ICH (431.xx). Patient-level information included demographics (including race/ethnicity: White, Black, Hispanic, Asian), hospital characteristics, comorbidities, primary payer, admission source, discharge destination, DRG, length of stay (LOS), and hospital charges. Costs were estimated by applying hospital-specific cost-to-charge ratios to charges. Adjusted LOS and cost (controlling for age, in-hospital mortality, and other covariates) by race/ethnicity were estimated using multivariate least-squares regression. RESULTS: Black, Hispanic, and Asian patients with a primary diagnosis of ICH at discharge were significantly younger, on average, than White patients (73.5 vs 61.2, 63.9, and 67.9 years, respectively; p < 0.01 for all comparisons). Black and Hispanic patients experienced longer hospital stays (p < 0.01) and incurred higher costs (p < 0.01), on average, than White patients. Among Black and Hispanic patients, adjusted length of stay (mean costs) per discharge were approximately 2.3 days ($1400) and 1.7 ($3400) higher, respectively, as compared to White patients. Asian patients had longer adjusted stays (2.6 additional days, p < 0.01) and higher costs ($830, p < 0.31).

CONCLUSIONS: There are meaningful differences in length of stay and cost of ICH hospitalizations among patients with different race/ethnicity. Improved acute treatment of stroke in this high-risk population may help to improve overall outcomes in these subgroups.

HIGH IMPACT

ADULT ECONOMIC STATUS AND OBESITY IN THE UNITED STATES: 2000–2002

Wu E1, Xie J1, Crémières PY1, Sullivan PV2
1Analysis Group, Inc, Boston, MA, USA, 2University of Colorado Health Sciences Center, Denver, CO, USA

OBJECTIVES: To assess the association between overweight/obesity and employment to population ratio (E/P Ratio), hourly wage, and annual income in the U.S. METHODS: Adults (age 18–64) in the 2000–2002 Medical Expenditure Panel Survey (MEPS) were classified as normal weight (BMI<18.5), overweight (BMI25–29.9), and obese (BMI ≥ 30). Underweight (BMI < 18.5) individuals were excluded. E/P ratio, hourly wage, annual income, and poverty status of the overweight and obese adults were compared to that of the normal weight adults, respectively, adjusting for demographic characteristics using a stratification matching method. MEPS sampling weights were applied to ensure nationally representative estimates. The analyses were also conducted for population subgroups defined by gender, race, ethnicity, and physical activity.

RESULTS: The study sample includes 35,989 adults, with 13,744 normal weight, 13,321 overweight, and 8,924 obese. The E/P ratio was 87.1% for the overweight sample, 83.8% higher (p < 0.01) than the normal weight sample; and 82.4% for the obese sample, 1.7% lower (p < 0.01) than the normal weight sample. The obese sample made $1.63 less per hour (p < 0.01) and $353 less annually compared to the normal weight sample (p < 0.01). Compared to the normal weight sample, obese adults were more likely to be poor. No significant difference of annual income and poverty level were found between the overweight and the normal weight sample. Systematic differences between different population subgroups were found. CONCLUSIONS: Obese adults are less likely to be employed, have lower annual incomes and hourly wages, and are more likely to be poor than normal weight adults.

CLINICAL IMPACT OF PHARMACOTHERAPY VERSUS NON-PHARMACOLOGIC MANAGEMENT AMONG COMMERCIALY INSURED PERSONS AGED ≥65 YEARS WITH OVERACTIVE BLADDER

Joyce AT1, Jumadilova Z2, Trocio J1, Foltz Boklage S2, Girase P3
1PharMetrics, a unit of IMS, Watertown, MA, USA, 2Pfizer, Inc, New York, NY, USA, 3PharMetrics, a unit of IMS, Fort Washington, PA, USA

OBJECTIVE: To examine the incidence of overactive bladder (OAB)-related clinical events for elderly patients receiving pharmacotherapy compared with those receiving non-pharmacologic management. METHODS: Data were obtained from the PharMetrics Patient-Centric Database on continuously benefit-eligible patients aged ≥65 years diagnosed with OAB between January 2002 and December 2003. Patients were categorized into 2 cohorts: those receiving pharmacotherapy, including long-acting tolerodine, or immediate- or extended-release oxybutynin and those receiving non-pharmacologic management. Patients were matched 1:1 by the estimated propensity score for OAB pharmacotherapy using a logistic regression model that included selected demographic and clinical characteristics. The incidence of clinical events, including assessment of depression, urinary tract infections (UTIs), and falls or fractures was evaluated. Crude event rates were reported, as well as the risk of an event using Cox proportional hazards models adjusting for important demographic and clinical characteristics. RESULTS: A total of 1681 matched pairs were identified. Mean ± SD age was 78 ± 8 years; 60% were women. After matching, differences in baseline patient characteristics between cohorts were not significant. The incidence of depression (10.2% for pharmacotherapy vs 11.0% for non-pharmacologic management; p = NS) and fractures (8.6% vs 10.1%; p = NS) was numerically lower in the drug-treated cohort, and the incidence of UTI was significantly lower (28.1% vs 36.5%; p < 0.0001). Adjusted rates using Cox proportional hazards models were similar, with no difference in the risk of depression (hazard ratio [HR] = 0.980; 95% confidence interval [CI], 0.795–1.208; p = NS) or fractures (HR = 0.863; 95% CI, 0.691–1.079; p = NS) between the cohorts, and the risk of UTI was 28% lower among pharmacotherapy patients (HR = 0.718; 95% CI, 0.636–0.810; p < 0.0001). CONCLUSIONS: Pharmacotherapy may impart selected clinical benefits for some elderly patients with OAB compared with non-pharmacologic management. Careful consideration should be given to the selection of treatment approaches in this high-risk population.

THE EFFECTS OF STATIN (HMG-COA REDUCTASE INHIBITOR) COPAYMENTS AND STATIN ADHERENCE ON MEDICAL CARE OUTCOMES AND EXPENDITURES

Gibson TB1, Mark T2, Axelsen K1, Mackell J1, King H3, Basar O1, McGuigan K1
1Thomson Medstat, Ann Arbor, MI, USA, 2Thomson, Washington, DC, USA, 3Pfizer Global Pharmaceuticals, New York, NY, USA, 4Pfizer, Inc, New York, NY, USA

OBJECTIVES: We examined the effects of statin prescription drug copayments and statin adherence on cardiovascular utilization patterns, medical and prescription drug expenditures and other outcomes of statin therapy. METHODS: The 2001–2003 MarketScan database was used to study the health care utilization and expenditure patterns of continuously enrolled statin users in employer sponsored health plans. We analyzed the utilization patterns of 93,296 continuing users who had previously filled at least one statin prescription in 2000 and 24,128 users who were new to statin therapy in the first half of 2001. A two-stage estimation approach consisted of a multivariate logit model estimating the relationship between copay-
Generalized Linear Models were estimated to examine the effects of adherence on utilization patterns and expenditures in 2003.

RESULTS: Higher copayments led to lower levels of statin adherence (Odds Ratio 0.75 p < 0.01 prevalent users, 0.72 p < 0.01 new users). For continuing users of statins higher levels of statin adherence were associated with fewer adverse events: hospitalizations (OR: 0.419 p = 0.01), cardiovascular hospitalizations (OR: 0.425 p = 0.046) and ER visits (OR: 0.219 p < 0.01).

Adherent patients had a larger number of physician office visits (OR: 14.84 p < 0.01 continuing users, 5.07 p < 0.01 new users) and higher prescription drug expenditures (partial elasticity 0.204 p < 0.01 continuing users, 0.314 p < 0.01 new users). However, medical expenditures and total (medical plus prescription drug) expenditures for these patients were not significantly different from nonadherent patients.

CONCLUSIONS: Statin copayments serve as a financial barrier to statin adherence. Lower levels of adherence are associated with adverse cardiovascular and medical outcomes for patients remaining on statin therapy.

Policy makers and planning managers should consider effects of higher statin copayments on adherence, utilization patterns and clinical events.

IMPACT OF PATIENT SELECTION CRITERIA AND MODEL SPECIFICATION ON COMPARISONS OF ALTERNATIVE THERAPIES: THE CASE OF ATYPICAL ANTIPSYCHOTICS

Marshall TS, McCombs JS
1 Eli Lilly Fellow, Department of Pharmaceutical Economics and Policy, University of Southern California; 2 Associate Professor, Department of Pharmaceutical Economics and Policy, University of Southern California

OBJECTIVES: Investigate how selection criteria and statistical model specifications affect comparisons of alternative medications using retrospective database analyses.

METHODS: Data from the Medi-Cal Program were used to conduct a series of head-to-head comparisons of alternative antipsychotics to test the sensitivity of results to sample selection and model specification. OLS models were estimated for duration of therapy defined on breaks in therapy >15 days. Five models were compared: (1) a baseline model with only demographic independent variables and selection criteria limited to age (18–100) and prior eligibility >6 months; (2) screening for one year of post-treatment data; (3) screening for schizophrenia; (4) addition of prior diagnoses and utilization; and (5) addition of independent variables for episode type.

RESULTS: The baseline sample consisted of 263,206 episodes. Average unadjusted days of therapy for typical antipsychotics, olanzapine, risperidone and quetiapine were 63, 138, 143 and 131, respectively. Model 1 found longer duration for all atypical antipsychotics relative to conventional drugs (63–67 days). Risperidone exhibited longer duration relative to olanzapine (+6 days, p < 0.0001) while olanzapine duration exceeded quetiapine by 8 days (p < 0.0001). Duration for typicals increased from 63 days to 112 days in the schizophrenia analysis (N = 70,630), reducing the estimated differences favoring atypicals to 29–32 days (p < 0.0001). Adding independent variables for prior utilization and diagnostic mix reversed risperidone’s advantage over olanzapine from +6 to −4 days (p < 0.0001). Results favoring quetiapine over olanzapine in duration of therapy on all antipsychotics was reversed from +4 to +16 days to −3 days when covariates for episode type were included in the model.

CONCLUSIONS: Differences in duration of antipsychotic therapy exist across diagnostic group and episode type. Differences also exist in the diagnostic and episode mix across drugs. Therefore, disaggregated patient samples and expanded model specifications provide more accurate estimates of differences in treatment duration.

NATIONAL TRENDS IN THE DIAGNOSIS OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AND USE OF STIMULANTS AMONG CHILDREN IN THE UNITED STATES, 1993–2003

Toh S
Harvard School of Public Health, Boston, MA, USA

OBJECTIVES: To estimate the prevalence of diagnosis of attention-deficit/hyperactivity disorder (ADHD) and use of stimulants for children aged 3–18 years in the US ambulatory settings.

METHODS: Data from the National Ambulatory Medical Care Survey (NAMCS) and the National Hospital Ambulatory Medical Care Survey (NHAMCS) 1993–2003 were used. The main outcome measures were annual visits with diagnosis of ADHD, visits with prescription of stimulants, and proportion of stimulants prescribed in visits with diagnosis of ADHD. Diagnosis of ADHD was determined using ICD-9-CM code 314. Stimulants (methylphenidate, dexamfetamine, pemoline, and amphetamine compounds) were identified by generic codes.

RESULTS: 95% confidence intervals were calculated and PROC SURVEYFREQ in SAS 9.1 was used to account for the complex sampling designs of these surveys. The results were weighted to reflect national estimates. RESULTS: Outpatient visits made by children 3–18 years of age increased from 131 (95% CI: 109–153) million in 1993 to 165 (137–192) million in 2003. Diagnosis of ADHD increased 127%, from 3.2 (1.3–5.2) million to 7.4 (5.2–9.5) million, accounted for 2.5% (1.0%–3.9%) and 4.5% (3.4%–5.6%) of all visits made by children in 1993 and 2003, respectively. Visits with stimulants prescribed jumped from 2.7 (0.9–4.5) million in 1993 to 6.6 (4.5–8.7) million in 2003. Proportion of stimulant use in children doubled over this period, from 2.1% (0.7%–3.4%) to 4.0% (3.0%–5.0%). Proportion of children with ADHD treated with stimulants ranged from 64.0% in 1997 to 77.3% in 1996, with an average of 70.4% (68.1%–72.8%) over the years studied. CONCLUSIONS: There was a steady growth in prevalence of ADHD and stimulant use among children aged 3–18 years in the US between 1993 and 2003. Approximately 70% children with ADHD were treated with stimulants. As appropriateness of treatment could not be determined in the current databases, whether this percentage represents overutilization of underutilization of stimulants merits further studies.

USE PATTERNS AND OUTCOMES ASSOCIATED WITH TYPICAL DEPOT ANTIPSYCHOTIC AGENTS IN THE SCHIZOPHRENIA CARE ASSESSMENT PROGRAM (SCAP)—AUSTRALIA

Christova L1, Mudge M1, Davey P1, Montgomery W2
1 M-TAG Pty Ltd—A unit of IMS Health, Sydney, NSW, Australia; 2 Eli Lilly and Company, Sydney, NSW, Australia

OBJECTIVE: To assess the clinical characteristics and medication patterns of patients with schizophrenia treated with typical depot antipsychotics compared with oral antipsychotics in the usual care setting in Australia.

METHODS: This was a prospective, single-site, observational study of 348 subjects with schizophrenia assessed at six-month intervals over three years. Data were collected via face-to-face interviews by research personnel and from external information systems to evaluate resource utilisation. The two groups were compared for demographic and clinical characteristics at baseline, co-therapy use, rate and average length of stay (ALoS) of hospitalisation over the three years. Analysis of variance was used to compare continuous variables, whereas the chi-square test was used for categorical outcomes.

RESULTS: A total of 144 and 179 patients were treated...