ments and adherence from June 2001 through December 2002. 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. Policymakers and plan 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 ANTIPISYCHOTICS

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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.

Mental Health

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

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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, dextemethylphenidate, pemoline, and amphetamine compounds) were identified by generic codes. 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

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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
with depot and oral antipsychotics, respectively. 25 patients were not treated with any antipsychotic medication, so were excluded from the analyses. Compared with oral users, depot patients were more likely to: have had more previous episodes of schizophrenia; have spent more days in hospital, be male; be less educated; be unemployed; be violent; and have experienced non-violent crimes. Approximately 50% of all depot users were treated with an oral antipsychotic supplement as co-therapy. A higher proportion of depot users were admitted and re-admitted to hospital throughout the study, with significant differences in year 2 and 3 (p < 0.01, respectively). The ALoS was consistently higher in depot users compared with oral users over the three years.

CONCLUSION: Patients treated with typical depot antipsychotics appear to be distinctly different from those treated with oral antipsychotics. Depot users were found to consume considerably more health care resources. This study indicates that there may be a subset of the schizophrenia population whose clinical needs are not currently well met by existing treatment options.

**MH3**

**NICE’S COST-EFFECTIVENESS APPRAISAL OF CHOLINESTERASE INHIBITORS: ASKING THE RIGHT QUESTION**

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**OBJECTIVE:** The National Institute for Clinical Excellence’s (NICE) initial evaluation of cholinesterase inhibitors for Alzheimer’s disease failed to account for current guidance in the UK, which states that only patients who respond to treatment should continue with therapy. This study re-values cost-effectiveness estimates using the same model in accordance with current guidance.

**METHODS:** The Assessment of Health Economics in Alzheimer’s Disease (AHEAD) model, published in 2001, was adapted by the NICE appraisal group for their evaluation. The original AHEAD model was used to estimate the cost-effectiveness of continuing therapy only in responders. Where possible, model inputs were based on values used by NICE. Only patients who experienced no decline in cognition after six months of treatment with galantamine continued treatment, for the subsequent five years. A health care payer perspective was adopted. Sensitivity analyses on costs, utilities, discount rates, treatment effects and time horizon were conducted.

**RESULTS:** NICE reported the cost-effectiveness of galantamine as £46,000 per discounted QALY gained in its augmented base case results. Shadowing NICE inputs, and assuming all patients continue with treatment regardless of response, the original AHEAD model results in a ratio £32,000, so some differences between the two analyses remain even when using similar inputs. Using AHEAD, if only responders continue with treatment, the ratio falls to £11,000, a 67% drop. If a responder analysis in the NICE study would also result in a 67% reduction in their estimate, one would expect a new NICE ratio of roughly £15,000. Treatment costs and time horizon were influential. If projections are extended to 6 years, the ratio falls to £7000. Varying the daily cost of galantamine by £0.50 changes cost per QALY estimates by about £5000.

**CONCLUSIONS:** NICE’s initial cost-effectiveness assessment was not in agreement with current guidance and results in inappropriately high estimates of cost-effectiveness.