OBJECTIVE: To estimate the annual cost of chronic obstructive pulmonary disease (COPD) to the California Medicaid (“Medi-Cal”) program. METHODS: This study employed a retrospective matched cohort design and administrative claims data for a 20% random sample of Medi-Cal recipients. Patients selected were 50+ years of age, with a diagnosis of COPD in 2000, and eligible for Medicaid as of January 1, 2000. The comparison cohort consisted of patients without COPD matched on age, gender, race, and dual (Medicare/Medicaid) eligibility status. The cost of COPD was estimated as the difference in mean Medi-Cal payments between the COPD and comparison cohorts during 2000. RESULTS: A total of 12,538 patients with COPD met study inclusion criteria. Approximately 8% were diagnosed with emphysema, 37% with chronic bronchitis, and 55% with unclassified chronic airway obstruction. COPD patients and their matched controls (n = 12,538) averaged 70 years of age; 55% were female, 55% were white, and 65% were eligible for Medicare benefits. Charlson comorbidities, especially congestive heart failure and vascular disease, were more common in the COPD cohort. The proportion of patients hospitalized was higher in the COPD cohort both for respiratory-related conditions (19% vs. 2% for controls, p < 0.05) and for any reason (38% vs. 15%, p < 0.05). The annual per-patient cost of COPD was estimated to be $3185 ($9537 for the COPD cohort minus $6352 for the control cohort), 55% ($1765) of which was due to hospitalizations. Annual per-patient costs of COPD were $4679 for patients <65 years versus $2322 for those 65+ years. Disease costs also were higher among patients with emphysema ($7094) versus chronic bronchitis ($3131) or unclassified chronic airway obstruction ($2694). CONCLUSIONS: On an aggregate basis, COPD costs the Medi-Cal program $200 million annually. Acute hospitalizations drive costs, despite coverage available through Medicare for the use of these services by elderly patients.

NONCONFORMANCE WITH NCEP-ATP III RECOMMENDATION ON LIPID/LIPOPROTEIN MEASUREMENT AT BASELINE: A RISK FACTOR FOR EMERGENCY OR HOSPITALIZATION?
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OBJECTIVES: According to National Cholesterol Education Program—Adult Treatment Panel III, baseline lipid and lipoprotein measurements should be documented prior to initiating lipid-lowering therapy. This study describes the patterns of nonconformance to the measurement guideline, and assesses whether the nonconformance is associated with emergency department or hospital utilization. METHODS: Data were obtained from an administrative database of a managed care organization. The study sample consisted of all continuously eligible adult patients newly initiated with statins from June 1998–June 2000. All patients were followed for one year. Patients without lipid or lipoprotein measurement within six months prior to or on initiation date were identified as nonconforming. CPT codes were used to identify lipid/lipoprotein measurements. Cox proportional hazard regression evaluated the impact of laboratory nonconformance to time to the first emergency department or hospital utilization. Logistic regression was performed to assess the risk factors for nonconformance. RESULTS: Among 25,854 selected patients, 10,205 (39.5%) patients have any claim record for lipid/lipoprotein measurement before initiation of statin therapy. After controlling for 38 covariates including patient demographics, payer type, physician specialty, previous drug, and medical utilization pattern, and comorbidities, patients with nonconformance have 9.2% higher likelihood of earlier emergency department or hospital utilization conforming patients (p = 0.006). Logistic regression revealed that older age, HMO in contrast to PPO are risk factors of nonconformance, while prescribing physician specialty (cardiology or internal medicine), previous use of Niacin, and patients with comorbidities are more likely to receive baseline measurement. CONCLUSIONS: The use of administrative claims to determine conformance with ATP III on lipid/lipoprotein measurement is subject to reporting limitations, but it appears that recorded rate of conformance to the guideline recommendation is low. Nonconformance to the guideline recommendation is significantly associated with emergency department or hospital utilization.

COST-EFFECTIVENESS OF CLOPIDOGREL IN PATIENTS WITH ISCHEMIC STROKE, MYOCARDIAL INFARCTION, OR PERIPHERAL ARTERIAL DISEASE
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OBJECTIVE: Clopidogrel is an antiplatelet agent that has been shown to reduce the risk of ischemic stroke (IS), myocardial infarction (MI), and vascular death (“atherothrombotic events”) compared with aspirin in patients with recent IS, recent MI, or symptomatic peripheral arterial disease (PAD). The objective of this study was to estimate the cost-effectiveness of clopidogrel versus aspirin in these patients. METHODS: We developed a Markov model in which patients with recent IS, recent MI, or PAD were assumed to receive lifelong therapy with clopidogrel or aspirin. Reduction in risk of atherothrombotic events for clopidogrel (vs aspirin) was estimated using data from the Clopidogrel versus Aspirin in Patients at Risk of Ischemic Events (CAPRIE) clinical trial. Costs considered in the model included those of
antiplatelet therapy, inpatient and outpatient treatment of ischemic stroke, MI, and bleeds, and long-term care for patients with disability. We examined the cost-effectiveness of clopidogrel for subgroups of patients defined on the basis of age at therapy initiation (55, 65, and 75 years) and gender. Cost-effectiveness was assessed using the ratio of the difference (clopidogrel minus aspirin) in expected lifetime medical-care costs to the corresponding difference in life expectancy. A 3% discount rate was used. RESULTS: One hundred patients with recent IS, recent MI, or PAD receiving clopidogrel would experience 4.5–6.3 fewer atherothrombotic events and 3.6–8.7 fewer bleeds over their lifetimes in comparison with 100 patients receiving aspirin. The expected gain in life-years ranges from 0.33–0.69 per patient. Expected total lifetime medical-care costs are $9,222–$16,850 higher for clopidogrel patients. Cost-effectiveness of clopidogrel ranges from $40,204–$49,107 per life-year saved, and is sensitive to the assumed risk reduction for clopidogrel. CONCLUSION: Clopidogrel is cost-effective versus aspirin in patients with recent IS, recent MI, or PAD.

CURRENT PATTERNS OF CARE AND TREATMENT COSTS ASSOCIATED WITH VENOUS THROMBOEMBOLIC DISEASE
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OBJECTIVE: This retrospective, observational, health plan administrative claims database study examined treatment patterns, resource utilization, and costs of venous thromboembolic (VTE) disease [deep venous thrombosis (DVT) and pulmonary embolism (PE)] in a managed care setting. METHODS: Medical and pharmacy claims of patients with a newly diagnosed VTE event were gathered from 2 US health plan databases from January 1997 through September 2001. Inclusion criteria included a VTE event between January 1, 1998 and December 31, 2000 (no VTE diagnosis or anti-coagulation therapy 3 months prior to index VTE event), continuous health plan enrollment 6 months prior and 12 months after index VTE event, and a VTE medication fill after index date. Medical and pharmacy care associated with recurrent VTE or bleeding events were based on each patient’s index VTE event, and detailed by type, number, and cost. Costs of recurrent episodes were calculated using general linear model regression and bootstrap techniques. RESULTS: A total of 2147 patients (DVT = 1499; PE = 373; DVT&PE = 275) were enrolled (mean age = 61.6 ± 15.9 years, 46.3% male). Median pre- and post-index observation times were 17.1 and 19.2 months, respectively. Mean total medical costs for DVT, PE, and DVT&PE during the index VTE episode were $2293, $7157, and $3963, respectively. Warfarin treatment was administered for a mean 6.3 months at an average cost of $145. The annualized rates and adjusted costs of post-index VTE events were 9.48% and $5331, respectively, for VTE episodes; and 5.52% and $8978, respectively, for bleeding episodes. The rate of recurrent VTE episodes was significantly lower in the DVT group than in the PE group, and the cost of post-index bleed episodes was significantly higher in the PE group. No other recurrent rates or cost differences were significant. CONCLUSIONS: Current therapy for VTE patients is associated with high costs and significant recurrent and adverse events. Approaches to therapy that increase effectiveness and decrease risk are needed.

MENTAL HEALTH

GENDER VARIATION IN QUALITY OF PHARMACOLOGIC CARE OF CHILDREN DIAGNOSED WITH ATTENTIONDEFICIT/HYPERACTIVITY DISORDER (ADHD)
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Gender variation in diagnosis and treatment of ADHD is well documented: boys are more likely to be diagnosed and receive pharmacologic treatment than girls. However, little is known about gender variation in the quality (dosage and persistence) of pharmacologic treatment received by ADHD-diagnosed children. OBJECTIVE: To examine gender variation in intensity and persistence of psychostimulant treatment among a national, population-based sample of ADHD-diagnosed children. METHODS: We analyzed medical and pharmaceutical claims in the Medical Expenditures Panel Survey (MEPS) from January 1 through December 31, 1998 among all ADHD-diagnosed children (N = 195) aged 4–19 years. Psychostimulant doses were converted to Methylphenidate Equivalent Units (MEU) according to previously published research (MEU: 20mg Methylphenidate = 10mg dextroamphetamine = 10mg amphetamine salts = 56.25mg Pemoline). Doses were classified as high (>15.0 mg MEU), medium (5.0–15.0 mg MEU), or low (<5.0 mg MEU). Persistence of treatment was determined by number of prescription fills (PF) in a calendar year. Separate weighted logistic and multiple regression analyses were conducted with MEU and PF as dependent variables respectively. RESULTS: As has been reported previously in the literature, males were 1.3 (+/-0.004) times more likely to receive a prescription for psychostimulants (p < 0.001). However, among those receiving any psychostimulant, females were 1.2 (+/-0.008) times more likely than males to receive high doses (p < 0.001). There was no difference in persistence of psychostimulant treatment by gender. CONCLUSION: Whereas girls with AD/HD were less likely to be treated with psychostimulants, once treated, they received higher...