costs. In this model, prescription non-procurement was more likely to be reported in the Medicare-only population (OR: 1.47; 95% CI 1.46–1.48) and in the Medicare plus Medicaid population (OR: 1.11; 95% CI 1.10–1.12) as compared to respondents with Medicare plus private insurance coverage. CONCLUSIONS: Significantly different rates of persons who forego filling a prescription for cost reasons were observed among Medicare beneficiaries. More vulnerable groups of seniors were identified. Dual eligible Medicare/Medicaid enrollees and those with Medicare alone are more likely to restrict medication procurement due to cost.

**MEDICATION TREATMENT PERSISTENCE OF OVERACTIVE BLADDER/URINARY INCONTINENCE PATIENTS IN A CALIFORNIA MEDICAID PROGRAM AND THE BENEFIT OF THEIR REFILL ADHERENCE ON URINARY TRACK INFECTION**

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**OBJECTIVES:** 1) To explore 1-year persistence pattern of Overactive Bladder/Urinary Incontinence (OAB/UI) medication treatment; 2) to discover factors associated with persistence; and 3) to investigate the benefit of refill adherence on urinary tract infection (UTI). **METHODS:** Retrospective analyses on continuously enrolled adult patients diagnosed with OAB/UI and received at least one OAB/UI medication from July 1999 to April 2001 (with 6-month run-in period and 1-year follow-up period) are employed. Time to discontinuity, defined as the period from the index date to the discontinuity date (when any medication-uncovered interval is longer than 30 days), is used to describe the persistence pattern of patients. Adherence is measured by medication possession ratio (MPR). A Cox Proportional Hazard model is applied to reveal risk factors of non-persistence. A logistic regression is used to examine the relationship of those same factors with refill adherence and to assess the effect of adherence on UTI incidence rate. **RESULTS:** Of 6518 eligible patients, 26.8% have only 1 prescription. 5751 patients (88.2%) discontinue within the following year, among which, 92.2% fail to continue treatment after 183 days. Only 952 patients (14.6%) exhibit good adherence (MPR >= 0.8). The mean MPR of the whole cohort is 0.39 and the median is 0.24. Significant predictors of higher persistence include Caucasians, 75 years old or above, prior medication use, and initiating extended-release form of drug. Patients with prior prescription of antidepressant or diagnosis of depression show lower persistence. Similar results are found for adherence. Logistic regression indicates that good refill adherence reduces the risk of being diagnosed with UTI by 33% in the post-treatment period (P = 0.0008, OR = 0.672). **CONCLUSIONS:** Both persistence of OAB/UI medication and refill adherence are low, suggesting the need to develop effective interventions in OAB/UI and UTI.

**PREDICTIVE MODEL OF MEDICATION ADHERENCE IN CARDIOVASCULAR DISEASE**

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**OBJECTIVES:** Medication non-compliance has been a growing concern for healthcare management and can result in progression of cardiovascular disease (CV) and an increase in economic burden. To develop models to predict the risk for future medication non-compliance among patients with hypertension and hyperlipidemia. **METHODS:** Two predictive models were constructed using pharmacy and medical claims from 2380 patients newly treated with anti-hypertensive medications and 3387 patients newly treated with statins in a managed care setting. The outcomes of interest were the future medication compliance rates for both disease states over a one-year follow-up period. The potential predictors of compliance included patient characteristics such as age, gender, type of insurance plan, Chronic Disease Score (CDS), presence of select comorbidities, copayments, total medication burden, hospital encounters, outpatient physician encounters, and initial compliance (0–3 months of therapy immediately before the follow-up period). Linear regression models were applied to construct the models. Each population was randomly split by a 2 to 1 ratio to facilitate split-sample validation of the models. **RESULTS:** Based on the hypertension model, age, gender, total co-payments, total medication burden, and initial compliance showed significant relationship with compliance (R2 = 0.45). Based on the hyperlipidemic model, age, gender, presence of a second CV condition (e.g. angina), outpatient physician encounters, co-payments at drug initiation, total medication burden, and initial compliance demonstrated significant relationship with compliance (R2 = 0.43). In both populations, initial compliance was the strongest predictor of sustained compliance. **CONCLUSION:** These models can serve as a useful tool to guide providers in promoting medication compliance. Both models suggest that assisting the patient to establish compliant behavior within the first three months of a new treatment regimen can significantly influence sustained medication adherence with CV medications.

**A TIME-VARYING SURVIVAL MODEL FOR THE ASSOCIATION OF ADHERENCE WITH HMG- COA INHIBITORS TO THE RISK OF ADVERSE EVENTS**

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OBJECTIVES: Long-term continuous use of HMG-CoA inhibitors (statins) has been shown to be beneficial to patients with coronary artery disease in several large clinical trials. This study demonstrates a promising model to assess the relationship between medication adherence with statins and the risk of adverse event (hospitalization or emergency visit) in a managed care population.

METHODS:Conventional outcomes assessments for medication compliance often encounter the problem of identifying the causal relationship between adherence and outcomes (e.g., adverse event). It is not unusual that medication discontinuation occurs after and possibly due to a hospitalization event. To determine the strength of the relationship between statin adherence and risk of hospitalization, a Cox proportional hazard model was developed with the time-varying variable defined as proportion of days covered by statins (PDC) as of the date of first adverse event. For censored subjects, PDC was chosen as of the end of study period or the date of disenrollment, whichever occurred first. 68,974 adult patients were identified as new statin starters during a 2-year period from June 1998 to June 2000. Other covariates included demographics, payer types, previous drug, medical and procedure uses, and comorbidities.

RESULTS: The time varying covariate (PDC) was the second most significant predictor of time to adverse event (chi-square < 1610.9, p < 0.0001). The most significant predictor of an adverse event was the existence of a previous adverse event (chi-square = 2043.1, p < 0.0001). Patients with higher age, comorbidities and previous high utilization have higher risk. In addition, patients in HMO and POS have significantly lower risk than patients with FFS and PPO.

CONCLUSIONS: Time-varying PDC is one of the strongest predictors of the risk of an adverse event. Persistence is significantly associated with lower risk of occurrence of hospitalization or emergency visit.

DRUG POLICY

RELATIONSHIP BETWEEN DIRECT-TO-CONSUMER ADVERTISING AND PRODUCT INNOVATIVENESS

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OBJECTIVE: The purpose of this study is to determine if there is a relationship between product innovativeness and direct-to-consumer advertisement. METHODS: Products advertised directly to the consumer (DTC) were divided into two categories using the FDA therapeutic and chemical classification system. New molecular entities and products with priority reviews were classified as ‘innovative’; all other standard review products were classified as ‘standard’. Information on product classification and the total number of products approvals was obtained from FDA prescription drug approval data. The amount spent on DTC advertising between 1997 and 2001 was obtained from published data. Products with less than a 0.1% share of annual DTC expenditures were excluded, as were products launched before 1990, and vaccines and biotech products. The average annual expenditure on DTC advertisement from 1997–2001 was calculated for each product. Data were analyzed using chi-square and t-tests.

RESULTS: The inclusion criteria were met by 106 distinct products. The proportion of products advertised in the innovative group was significantly higher than the standard group (p < 0.006). Innovative products are 1.7 times more likely to be advertised directly to the consumer than the standard products. There was no statistical difference in the average annual DTC expenditure per product in each group (p = 0.63).

CONCLUSION: Innovative products are more likely to be advertised directly to the consumer which may increase patients’ request for those medications. This information may help decision makers understand potential product demand during the formulary decision making process.

ECONOMIC IMPACT OF PROZAC® PATENT EXPIRATION AND THE 180-DAY GENERIC FLUOXETINE EXCLUSIVITY IN A PUBLICLY-FINANCED PRESCRIPTION PROGRAM

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OBJECTIVE: The purpose of this study was to describe the economic impact of generic fluoxetine entry on trends in utilization and costs of new generation antidepressants (Celexa®, Effexor®, Luvox®, Paxil®, Prozac®, and Zoloft®) within the Texas Medicaid Program. Additionally, diffusion of market share among generic manufacturers following the 180-day marketing exclusivity period was also examined.

METHODS: Retrospective prescription claims data from January 2001 through August 2002 were analyzed. Claims were grouped across study agents: 1) Prozac®, 2) fluoxetine, and 3) other (Celexa®, Effexor®, Luvox®, Paxil®, and Zoloft®) antidepressants. Costs were based on payments to pharmacies.

RESULTS: A total of 1,154,565 prescription claims were analyzed. Prior to the introduction of generic fluoxetine, market share for Prozac® was 19.0% (10,754 claims) in July 2001. In August 2002, market share for Prozac® decreased to 2.2% (1,479 claims), of which, 952 claims (64.3%) were for the Prozac® 20mg weekly dose, while market share for “other antidepressants” grew to 86.7% (57,259 claims). Generic fluoxetine market share was 11.0% (7,281 claims) in August 2002. Within the generic fluoxetine market, manufacturers with exclusivity experienced a decrease in market share from 100.0% (7,184 claims) in January 2002 to 63.6% (4,629 claims) in August 2002. The estimated average payment per unit (post rebate) for Prozac® 20mg capsules prior to its patent expiration (January–July 2001), during the 180-day generic exclusivity period (August 2001–January