DOES PLAN DESIGN AFFECT THERAPY ADHERENCE FOR CHRONIC CONDITIONS!

**OBJECTIVES:** To evaluate influences of prescription drug benefit parameters on participant adherence to drug therapies for chronic conditions. **METHODS:** Deidentified pharmacy claims were analyzed for participants continuously eligible from January 1 to December 31, 2003 and treated for diabetes, hypertension or hypercholesterolemia. Participants were grouped according to plan design: 201,179 diabetics in 666 groups; 535,446 hypercholesterolemia participants in 845 groups; and 877,918 hypertension participants in 940 groups. Based on a combination of compliance and persistence, average adherence was calculated for each group. Multivariate linear regression analyses were performed for the conditions, controlling for demographics and comorbidities. **RESULTS:** Analyses showed consistent effects of plan design parameters on adherence across the conditions. While major plan design changes intended to drive mail utilization may cause initial therapy disruption, resulting in short-term decreases in adherence (parameter estimate (PE) between -0.046 and -0.025, p < 0.0001), overall higher mail utilization improves adherence consistently across conditions (PE between 0.043 and 0.062, p < 0.0003). Clinical programs improve adherence for diabetes therapies (PE = 0.017, p = 0.0001). The effect of co-payment amounts varies with availability of generic and formulary alternatives for each therapy. Adherence improves when co-payment amounts lead to decreased participant cost-share in generic and preferred mailorder drugs. Adherence improves when generic, formulary and mail-service cost-share is lower than retail and nonformulary cost-share. The effect of co-payment amounts is small but measurable and significant within 90% confidence interval. Older populations were more adherent (PE between 0.001 and 0.004, and p < 0.0001). Female participants exhibited higher adherence (PE between 0.050 and 0.112, p <= 0.0048). Populations with higher income have improved adherence to hypercholesterolemia therapies (PE = 0.00065, p = 0.0001). Populations with comorbidities are more adherent (PE between 0.014 and 0.023, p <= 0.0004). **CONCLUSIONS:** Plan design parameters play an important role in therapy adherence for chronic conditions. Effects of plan design parameters persist when accounting for demographic and comorbidity factors.

**EVALUATION OF FACTORS RELATED TO DIAGNOSIS OF HYPERLIPIDEMIA: THE ROLE OF DIRECT-TO-CONSUMER ADVERTISING EXPENDITURES, HEALTH INSURANCE COVERAGE, AGE AND GENDER**

**OBJECTIVES:** a) To evaluate the relationship of direct-to-consumer advertising (DTCA) expenditures, health insurance coverage, age and gender with number of patients diagnosed with hyperlipidemia; b) To compare the relationships prior to and following the relaxation of guidelines for broadcast advertising. **METHODS:** The data sources utilized were Competitive Media Reporting (CMR) and the National Ambulatory Medical Care Survey (NAMCS) for the time period January, 1994 to April, 2001. The monthly DTCA expenditures for antilipemics were calculated from the CMR dataset. Applying weights to the NAMCS data yielded national estimates. Using NAMCS, the monthly frequency of patients diagnosed with hyperlipidemia (ICD-9 codes) was calculated. Each month, among patients diagnosed with hyperlipidemia, percentage of individuals 45 years and older, percentage of women and percentage of individuals with health insurance coverage were calculated. The dataset was then split into two time periods (January, 1994 to August, 1997 and September 1997, to April, 2001) to identify the change in relationships following the relaxation of rules for broadcast advertising in August 1997. Time series analysis was conducted to determine which factors were related to number of patients diagnosed with hyperlipidemia during the entire time period and the two time periods. **RESULTS:** Only DTCA expenditures for antilipemics was significantly related to the frequency of patients diagnosed with hyperlipidemia (p < 0.05). For every $1000 spent on advertising antilipemics, 14 more patients were diagnosed with hyperlipidemia. On splitting the dataset, DTCA expenditures were significantly related to number of patients diagnosed with hyperlipidemia only prior to relaxation of guidelines (January, 1994 to August, 1997). **CONCLUSION:** Although DTCA expenditures were significantly related to number of patients diagnosed with hyperlipidemia during the entire time period from January, 1994 to April, 2001, on evaluating the relationship prior to and following relaxation of guidelines, this relationship was significant only prior to the relaxation of guidelines.

**MONITORING OF LIPOID LEVELS AND ADVERSE EVENTS AMONG TEXAS MEDICAID PATIENTS ON STATIN THERAPY**

**OBJECTIVES:** This study assessed the occurrence and the predictors of lipid tests and liver function tests (LFTs) among Texas Medicaid patients on statin therapy. **METHODS:** A retrospective cohort analysis using pharmacy and medical claims of new statin users between September 1, 1999 and August 31, 2001 was done. The presence of lipid and liver function tests (LFTs) after the start of statin therapy were determined based on the procedural codes. Logistic regression models were used to assess the predictors of the occurrence of the tests. Variables in the model were demographic variables, disease conditions, specialty of the physician prescribing the first statin prescription, and the presence of tests prior to start of therapy. **RESULTS:** Of the total (N = 7440) patients, 65.2% were females and mean age was 49.7 years (S.D. = 9.4 years). White, non-Hispanic (42.7%), Hispanic (32.7%), and Black, non-Hispanic (22.5%) formed the majority.