tions based on a single treatment feature such as cost, or select the current-treatment alternative in all questions. We used probit models to identify the characteristics of subjects who are more likely to reject scenarios and controlled for scenario rejection in estimating preference models. RESULTS: 463 respondents completed the survey. 12.4% of respondents did not answer the trade-off questions, 40.6% dominated on price, and 51.3% chose their current treatment in all trade-off questions. Respondents were less likely to reject scenarios if they had higher incomes (p < 0.001), more education (p < 0.001), were recently diagnosed with RA (p = 0.006), and if the cost of their current treatment was high (p < 0.001). Respondents who currently use an oral medication are less likely and respondents who currently use an injected or infused treatment are more likely to always pick current treatment. Controlling for price-dominant subjects increases willingness to pay for the “chance that the medicine works well 100% of the time” from $217 ($166–$268) to $471 ($396–$545) per month. CONCLUSION: Scenario rejection is a form of selection bias. Rejectors provide no trade-off information for estimating treatment preferences. Rejection is correlated with several observable variables, which makes it possible to control for potential bias in preference estimation. Controlling for price-dominant subjects can have a large impact on WTP estimates.

METHODS FOR MEASURING DOSE ESCALATION IN TNF ANTAGONISTS FOR RHEUMATOID ARTHRITIS PATIENTS TREATED IN ROUTINE CLINICAL PRACTICE

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OBJECTIVES: To identify the most reliable approach for measuring dose escalation by comparing results from different methods that may affect clinical and drug utilization decisions. METHODS: Five methods of quantifying dose escalation were explored which compared: 1) weekly dose of last to first prescription; 2) average weekly dose of all prescriptions to standard dose; 3) weekly dose of subsequent prescriptions to first prescription and 3a) defining dose escalation as #Y’2 instances of dose increase; 3b) defining dose escalation by proportional dose increase (15%, 30%, or 50%); and 3c) calculating dose escalation as percent of patient-weeks. The example is based on claims data from 2002 to 2004, using RA patients newly initiated anti-TNFα (Enbrel or Humira) treatment with one year follow-up. Separate analyses were conducted for patients started on standard and high doses. RESULTS: For those who started on standard dose, dose escalation by method 1 and 2 was 6.2% and 8.4% for Enbrel patients (n = 1339) and, 13.7% and 26.6% for Humira patients (n = 417). Dose escalation by method 3a was 8.1% for Enbrel and 18.9% for Humira. Dose escalation by method 3b (with threshold of 15%, 30%, and 50%) ranged from 5.6% to 7.7% for Enbrel and 16.1% to 18.5% for Humira, respectively. Percent patient-time approach of 3c provides weekly incidences of dose escalation and exhibits a divergent pattern of dose escalation between the treatment groups over time, which diverges at about the 12th week of treatment. Dose escalation was uncommon in patients started with high dose. CONCLUSION: Estimate of dose escalation is method dependent. Simple approaches such as comparing last and first prescription were unable to capture the full extent of dose escalation. Use of multiple methods, such as method 3 and method 2 are recommended as the latter will also address dosing for patients initiated with high doses.

PODIUM SESSION I: CARDIOVASCULAR STUDIES

IMPACT OF A TARGETED PATIENT COMMUNICATION ENCOURAGING GREATER GENERIC STATIN USE

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OBJECTIVES: Evaluate a patient Formulary Notification Program (FNP) designed to encourage use of lower cost, clinically equivalent generic alternatives among non-formulary atorvastatin users. METHODS: This was a cross-sectional, case-control study conducted in a commercially insured population, targeting current atorvastatin users (date of last fill + days supply within 30 days of targeting). The case group received one of two letter-based Patient Communications (PCs) depending on channel of most current prescription fill (target prescription). The PCs informed patients of lower cost, clinically equivalent generic alternatives. Patients in retail pharmacies (n = 27,449) received information on copayment savings from generic use in retail. Patients in Home Delivery (HD) (n = 25,274) received information on savings from filling generic alternatives in HD. The PCs were mailed in July 2006 soon after availability of generic simvastatin. The control group consisted of current atorvastatin users (at time of case group targeting) who were not enrolled in a client that implemented the FNP. Control group members were matched to case group based on distribution channel [retail (n = 3186)/HD (n = 1012)] of target prescription. Prescription claims were examined through October 2006 for the outcome of switching to generic statin. Bivariate and logistic regression analyses were used to assess research objective. RESULTS: In retail, 11.9% of cases switched to generic compared to 4.8% in control group (p < 0.001). In HD, 20.6% of cases switched to generic statin compared to 8.1% in control group (p < 0.001). Controlling for demographic and plan design, patients who received PCs in retail had 64% greater odds (95% CI: 1.48–1.81) of filling generics relative to controls. Patients receiving PCs in HD had 81% greater odds (95% CI: 1.60–2.05) of filling generics in HD compared to respective controls. CONCLUSION: Informing patients of copayment savings from generic alternatives soon after patent expiration of a popular branded statin, is an effective strategy to encourage greater generic statin use.

MEDICATION REFILL PERSISTENCE: DOES PRESCRIPTION COST-SHARING MATTER?

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OBJECTIVES: To investigate and to quantify the influence of prescription cost-sharing on medication refill persistence by using two antihypertensive therapeutic classes: ACEs (angiotensin converting enzyme inhibitors) and ARBs (angiotensin II receptor blockers). METHODS: This is an observational cohort study utilizing a commercial insurer’s integrated medical and pharmacy claims database supplemented with public files. Members were new users of ACE and ARB single agents between January 1 and June 30, 2004. Medication refill persistence was measured three ways: total number of days without medication; proportion of days covered (PDC) with a cutoff point of 80%; and number of days to the first gap of more
than 15 days in medication coverage. Three statistical models corresponding to the three measures of medication refill persistence were performed: Tobit model, logistic regression, and survival analysis. Control variables included demographic and social economic information, health status, medication conditions, health service utilization, and drug benefit characteristics.

RESULTS: The study included 1549 members, 42.0% female, mean age 55.7 years, with member cost-sharing of about $12 per 30 days supply. For every $1 increase in 30 day average cost-sharing, total gap increased by 2.7% (transferred Tobit coefficient = 0.027, 95% CI = [0.011, 0.043], p = 0.001); the odds of non-persistence (PDC < 80%) increased by 2.5% (OR = 1.025, 95% CI = [1.007, 1.042], p = 0.005); and the risk to have a gap of more than 15 days increased by 1.7% (HR = 1.017, 95% CI = [1.007, 1.027], p = 0.001). CONCLUSION: Prescription cost-sharing was associated with a significant and negative impact on medication refill persistence after controlling for other con-founders. It is important for health plans and self insured employers to consider the implications of member contribution on medication refill persistence when making pharmacy benefit design decisions.

LONG-TERM HEALTH OUTCOMES FOR PATIENTS HOSPITALIZED WITH UNSTABLE ANGINA AND NSTE MI IN THE CALIFORNIA MEDICAID POPULATION: ASSESSMENT OF CLOPIDOGREL THERAPY IN ACS

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OBJECTIVES: To evaluate the long-term health outcomes of ACS patients taking clopidogrel and aspirin, either alone or in combination, within the California Medicaid population.

METHODS: A retrospective claims study was conducted for the 10-year period from 1995–2004. Patients were ≥19 years of age, with 26 months of continuous eligibility prior to index date, and ≥1 month of continuous eligibility after index date. Patients hospitalized with UA or NSTEMI were identified using ICD-9 codes and divided into 3 subgroups: clopidogrel-only (CO), aspirin-only (AO), and clopidogrel/aspirin (CA). Cox proportional-hazard models were used to estimate hazard ratios (HR) for time to death, major bleeding events (MBE; ICD-9 codes 531.x1–535.x1), re-hospitalization, and revascularization with covariate adjustment. The unadjusted time-to-event curves were estimated using Kaplan-Meier (KM) techniques. The unadjusted time-to-event curves were estimated using Cox proportional-hazard models. The results suggest patients taking clopidogrel or aspirin, either alone or in combination, have similar long-term bleeding risk. The combination of clopidogrel and aspirin may reduce the risk of death compared with either drug alone. However, combination therapy did not lead to a decrease in re-hospitalization or revascularization compared with either drug alone.

THE IMPACT OF A CALCIUM CHANNEL BLOCKER PREFERRED DRUG LIST ON MEDICAID PRESCRIPTION EXPENDITURES AND UTILIZATION

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OBJECTIVES: On July 12, 2005 the Arkansas Medicaid program implemented a prior approval policy for calcium channel blockers (CCBs) in which Diltiazem ER, Dynacirc CR, Nifedipine ER, XL, CC, CR, Norvasc, and Verapamil SR, SA, were the preferred drugs. The objective of this study was to estimate the impact of this policy on CCB expenditures.

METHODS: This study utilized a time series panel design to evaluate the impact of the policy using Arkansas Medicaid administrative claims data obtained from January 2003 through May 2006. Auto-Regressive Integrated Moving Average (ARIMA) time series models were specified using monthly prescription expenditures and utilization in the pre-policy period (January 2003–June 2005) to forecast expenditures and utilization in the post-policy period. The Medicaid payer perspective was used and all prescription costs were calculated based on the amount paid for each claim adjusted for product specific CMS rebates. RESULTS: The average forecast expenditures for CCBs for August 2005–May 2006 was $426,706 (95%CI: 410,356–443,055) per month and observed expenditures were $331,547 indicating that the policy change was associated with a 22% reduction in CCB expenditures or $95,159 (95%CI: 78,809–111,508) per month. The average monthly savings were $114,521 prior to January 2006 and were $75,796 after Medicare dual eligibles began receiving Part-D benefits. Non-significant reductions in CCB utilization were observed in the initial 4 months following the policy, however by May 2006, 4065 (95%CI: 3811–4319) recipients were expected to be taking CCBs but only 3046 actually had a CCB prescription filled.

CONCLUSION: This CCB preferred drug list resulted in substantial savings of approximately $100,000 per month. Some of the savings appear to be a result of reduced utilization of CCBs which may indicate that other cardiovascular drugs may have been used in place of CCBs or CCB discontinuation.

WHAT IF THE FEDERAL SUPPLY SCHEDULE SET PHARMACEUTICAL PRICES FOR SENIORS?

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OBJECTIVES: The Medicare Modernization Act explicitly ruled out the possibility that the federal government could directly negotiate drug prices as an effective way to contain costs for Part D. Recent changes in the leadership of congress have led to a reemergence of debate on this issue. Taking a societal perspective, we sought to quantify how much money for prescription drugs could be saved among the elderly if prices nationwide were equivalent to 2006 Federal Supply Schedule (FSS) prices for several of the top selling prescription drug classes. METHODS: Cross-sectional analysis of the nationally representative Medical Expenditure Panel Survey, 2004. Adults > 64 years who filled a prescription for any drug within the following classes were included: Angiotensin Receptor Blockers, ACE inhibitors, HMG-CoA Reductase Inhibitors (Statins), Proton Pump Inhibitors, Non-Steroidal Anti-inflammatory, Histamine-2 Receptor Antagonists, Dihydropyridine Calcium Channel Blockers, and Steroid Inhalers. CONCLUSION: The savings appear to be substantial savings of approximately $100,000 per month. Some of the savings appear to be a result of reduced utilization of CCBs which may indicate that other cardiovascular drugs may have been used in place of CCBs or CCB discontinuation.