METHODS: This research examines the influence of different combinations of health insurance and types of payments on physicians’ prescribing patterns in the case of two major chronic conditions: hypertension and diabetes in the USA. METHODS: The study was based on information collected in physicians’ practices, obtained from medical records and physician visits. The analysis used simple and ordinal logistic regressions. Special attention was given to Medicare patients due to the lack of coverage for prescription drugs in this program. Two samples of individuals were extracted from the 1996 US National Ambulatory Survey, 1 of 1844 individuals diagnosed with hypertension and 1 of 694 individuals diagnosed with diabetes. RESULTS: There was a significant reduction in likelihood of access to drug therapy for patients with Medicare only compared to those patients with other types of insurance. Patients with Medicare only that were in a Health Maintenance Organization or had a prepaid type of payment were more likely to get prescribed drug therapy than patients with Medicare cover only and whom had other forms of payment such as fee for service or payment with a preferred prescriber organization. However, strong differences on the impact of different insurance plans exist between the two conditions. CONCLUSIONS: Results on both samples suggest that patients’ health insurance status does have some influence on physician prescribing decisions, especially for patients covered with Medicare. This research provides evidence at the stage of a physician’s visit, that the lack of additional coverage for prescription drugs may limit access to both prescribed drug therapies during the visit.

HEALTHCARE POLICY—Healthcare Management Studies

CHARACTERISTICS AND RISK FACTORS FOR HOSPITAL READMISSION IN MEDICAID POPULATION
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OBJECTIVES: To identify the risk factors for hospital readmission among the Medicaid population, and describe the characteristics of readmitted Medicaid recipients and their drug utilization patterns before, during and after the initial hospitalization. METHODS: A retrospective cohort research design was used for Medicaid patients hospitalized in 1999 or 2000. Hospital readmission was defined as one or more hospital readmissions to the same hospital within 30, 60, 90 days. Using the Ohio Medicaid database, 37,312 recipients with at least one hospitalization were selected for this study, including 18,882 readmitted recipients and 18,430 recipients non-readmitted comparison recipients. Logistic regression analysis was conducted to assess the risk factors.
associated with hospital readmission. **RESULTS:** Six percent of Medicaid recipients had at least one 90-day readmission and account for almost 12% of total Medicaid hospitalizations. Major diseases for readmission were diabetes mellitus (17%), hypertension (14%), non-dependent drug abuse (10%), and heart failure (10%). Non-readmitted patients are most likely to be hospitalized for pregnancy-related conditions. The odds ratios of risk for hospital readmission within 90 days were estimated as: 1.17 (95% CI: 1.11–1.23) for African American; 1.1 (CI: 1.05–1.16) for urban; 1.76 (CI: 1.59–1.96) for disabled or blind recipients; 1.4–1.8 times higher for recipients with ages 0–64 compared to elderly persons (age 65+); 1.51 (CI: 1.44–1.59) for recipients with emergency admission; 1.27 (CI: 1.19–1.36) for recipients with diabetes mellitus; 1.33 (CI: 1.22–1.44) for recipients with heart failure; and 1.26 (CI: 1.15–1.38) for recipients with asthma. In addition, readmitted patients were more likely than non-readmitted patients to not receive any outpatient prescription drugs. **CONCLUSIONS:** Efforts to reduce the number of hospitalizations should focus on high-risk recipients with disabled/blind, living in urban, younger or middle-age, and who had diabetes mellitus, heart failure, hypertension, asthma, and other severe conditions through appropriate drug utilization review and disease management programs.

**PHP47**

**PHYSICIAN HABIT AS A DETERMINANT OF MEDICATION CHOICE**

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**OBJECTIVES:** Retrospective pharmaceutical outcomes studies require controlling observable factors that influence physician choice and patient heterogeneity to minimize selection bias. However, most studies neglect the assessment of physician prescribing habit as a contributor to this choice. This study provides evidence that the physician prescribing habit is an influential factor in determining medication choice. **METHODS:** A Medicaid claim database was used to study the factors determining the initial prescription choice among 3 classes of asthma controller medications: inhaled corticosteroids, theophylline, and cromolyn. A total of 4748 pediatric asthma patients with an 8-month washout period were selected. A total of 834 different physicians prescribed controllers to this population. Thirty-five covariates were selected to model initial prescription choice, including patient demographics, comorbidities, previous drugs, health costs, seasonality, provider prescribing habit and volume. Physician prescribing habit was defined as the most frequently prescribed controller medication. To ensure exogeneity, physician prescribing habit and volume were defined from a separate population of 24,260 patients with controllers prescribed by the same cohort of physicians. We compared different multinomial logit (MNL) regressions according to the percentage of correct predictions generated from each model. A non-parametric data-partitioning tree (by SPSS/AnswerTree®) with Chi-square Automatic Interaction Detector (CHAID) method was applied to confirm the findings. **RESULTS:** The MNL model containing only one factor, physician prescription habit, correctly predicted 57.4% of the medication choices, while the MNL model with all other covariates only predicted 52.3% correctly. A combination of all 35 covariates achieves a prediction rate of 59.9%. The data-partitioning tree with CHAID method selected prescribing habit as the first variable to classify the outcome tree (chi-square = 1367, df = 6). Additional covariates identified by the CHAID method included race, prescription volume, and prescription volume squared. **CONCLUSIONS:** Physician prescribing habit is an influential factor in prescription decision choice in this case, and should not be neglected in retrospective pharmaceutical outcomes studies.

**PHP48**

**HOSPITAL PERFORMANCE EVALUATION METHODS IN A REGIONAL MANAGED CARE ORGANIZATION: RANDOM-EFFECT OR FIXED-EFFECT MODEL?**

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**OBJECTIVES:** Clinical risk-adjustment is important in evaluating hospital performance. However, the choice of risk-adjustment models may impact evaluation results. This analysis of the Hospital Quality and Service Recognition (HQSR) program evaluated the performance of 15 hospitals in a regional managed care organization. Two common estimating procedures were used to determine differences between hospitals in risk-adjusted complication rates and length of stay. **METHODS:** The HQSR program employs a multi-dimensional scoring algorithm that includes, among other measures, clinical complications and length of stay (LOS) of common maternity and surgery inpatient episodes. Both a fixed-effect model and a random-effect model were applied to calculate risk-adjusted complication rates and risk-adjusted LOS, by making the patient case-mix constant for all hospitals. The fixed-effect model treated patients from different hospitals as distinct groups, and estimated the hospital effect in a traditional regression framework. The random effect (mixed) model, on the other hand, assumed hospitals were sampled from a normally distributed population, and estimated effects based on an empirical Bayesian method. **RESULTS:** For maternity, mean risk-adjusted complication rates by fixed-effect and random-effect models were 9.02% (S.D. = 4.6%) and 9.01% (S.D. = 3.60%), and the mean risk-adjusted LOS by fixed and random-effect models were 2.47 days (S.D. = 0.22) and