once annually during the study period of 2000–2005, were ≥30 years old, and did not have a diagnosis of pregnancy or cancer. Hospitalization attributable to diabetes was defined as admissions due to diabetes, diabetic complications, or cardiovascular diseases. Cox-proportional hazard model was developed to determine significant factors for hospitalizations after adjusting for the study variables. Two-part model (First part: logistic regression and second part: generalized linear model with log link function) was utilized to estimate mean length of stay. RESULTS: A total of 7952 patients with type 2 diabetes were identified with mean age of 57.4. Approximately 5.4% of them were hospitalized due to diabetes. Type 2 diabetes patients were more likely to be admitted if they were older than 65 years (relative risk (RR) = 1.36; 95% confidence interval (95% CI) = 1.09–1.71), took both insulin and oral antidiabetic medications (RR = 4.31; 95% CI = 3.30–5.63) compared to patients without diabetic treatment, or had frequent physician office visits (RR = 2.06; 95% CI = 1.53–2.76). Overall, patients stayed at the hospital on average of 2.23 ± 0.08 days. CONCLUSION: Type 2 diabetes patients who took both insulin and oral antidiabetic medications due to poor glucose control were more likely to be admitted to hospital. It is recommended that aggressive early intervention for controlling blood glucose and improving compliance with diabetes treatment may prevent hospitalizations related with diabetes.

PDB12

CLINICAL AND ECONOMIC OUTCOMES RELATED TO A PAY-FOR-PERFORMANCE PROGRAM

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OBJECTIVE: Physician pay-for-performance are gaining momentum as an approach to improve health care quality in the United States. The objective of this study was to show the beneficial effects of physician incentive programs for the treatment of diabetic patients as well as the potential for cost saving. METHODS: Administrative claims data from a large regional health plan were used through the 2004–2005 time-frame. Diabetic patients age 18–75 with private health insurance coverage were included in the analysis. Multivariate Poisson regression was used to model the likelihood of diabetes-related hospitalizations between patients who were being treated by a physician participating in the incentive program and those that were not. Likewise, cost savings associated with diabetic patients treated by physicians participating in the incentive program was also computed. RESULTS: Over a two year period, patients in the P4P program showed a lower combined predicted number of hospitalizations (0.31) than that of patients not in a P4P program (0.39). In addition, cost benefit analysis using decision tree modeling showed the costs of the P4P program was entirely covered by the reduction in cost resulting from decreased hospitalization rates. With the incentive program, the health plan saved approximately $24 per adult diabetic and a total cost savings of $675,000. Sensitivity analysis shows that the higher quality of care resulting from the incentive based programs directly benefits outcomes of diabetes patients with an added benefit of reducing program cost. CONCLUSION: The cost savings associated with physician pay-for-performance programs depend highly on the effectiveness of the program to improve delivery of quality care. Physician incentive programs have the potential to improve patient outcomes as well as lead to economic benefits for payers.

PDB13

PREDICTING INPATIENT HOSPITALIZATION RISKS FOR MEDICAID DIABETES PATIENTS

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OBJECTIVE: To develop a model to predict the probability of diabetes patients having inpatient hospitalization in the following year. METHODS: A retrospective cohort study was conducted based on a population of 322 type II diabetes patients age ≥19 and enrolled in a Medicaid managed care plan from the year 2003 to 2005. Models were developed by using medical/pharmacy utilization data to predict the probability of having the following events in the next year: (1) whether the patient had any inpatient hospitalization, (2) whether the patient had any micro/macro vascular inpatient hospitalization, (3) whether the patient had any metabolic related inpatient hospitalization and (4) whether the patient had any infectious inpatient hospitalization. Main predictors of interests are diabetes compliance and the use of statin. Covariates include diabetes treatment pattern, age, sex, co-morbidities among other variables. Logistic model is used to conduct the analysis. RESULTS: The study population was 74% female with an average age of 49.2 (S.D = 8.4). Non-adherence of diabetes drug (odds ratio = 1.57, 95% CI: 1.09–2.24), use of statin (odds ratio = 0.58, 95% CI: 0.39–0.85), and previous inpatient history (odds ratio = 3.50, 95% CI: 2.42–5.07) were significant in predicting any inpatient hospitalization. Non-adherence of diabetes drugs was not a significant predictor for micro/macro vascular events (odds ratio = 0.74, 95% CI: 0.33–1.67), but it was associated with significantly increased probabilities of having metabolic events (odds ratio = 1.58, 95% CI: 1.03–2.43) and infectious events (odds ratio = 2.70, 95% CI: 1.10–6.66). The use of statin was significant only for predicting metabolic events (odds ratio = 0.49, 95% CI: 0.32–0.77). It was not significant for predicting vascular events (odds ratio = 0.98, 95% CI: 0.45–2.15) and infectious events (odds ratio = 1.40, 95% CI: 0.49–3.72). CONCLUSION: The modeling results show that improving compliance of diabetes drug and encouraging the use of statin could be associated with reducing inpatient hospitalizations in a short period of time.

PDB14

BUDGET IMPACT OF ADDING FIXED-DOSE COMBINATION OF PIOGLIPTAZONE PLUS GLIMEPIRIDE TO A FORMULARY PLAN OVER A THREE-YEAR TIME FRAME

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OBJECTIVE: To assess the budgetary impact of adding the fixed-dose pioglitazone plus glimepiride to a managed care formulary plan over a three-year period (2006–2008). METHODS: This model is an Excel-based spreadsheet which assumes a hypothetical scenario wherein a plan comprising one million covered lives assesses the financial impact of pioglitazone plus glimepiride to formulary. The prevalence of type 2 diabetes is assumed to be 4.64% or approximately 46,400 members. Existing oral antidiabetic (OAD) agents on the formulary include TZDs (pioglitazone, rosiglitazone, TZD combinations with metformin, & rosiglitazone plus glimepiride), sulfonylureas (glipizide, glyburide, glimepiride), metformin, & a DPP4 inhibitor (sitagliptin). Costs for these agents were based on WAC (2006). Market shares were based on internal market research and IMS data. Metrics of budgetary impact are reported in terms of annual treatment costs & per member per month (PMPM) costs. These