disease management program. As such, future efforts should be developed to increase retention in disease management programs designed for Medicaid recipients.

**PDB29**

**THE EFFECT OF INSULIN TREATMENT ON HEALTH CARE UTILIZATION IN TYPE-II DIABETES**

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**OBJECTIVE:** To evaluate the effect of insulin treatment on health care utilization among type-II diabetics. More aggressive glucose control treatment, particularly with insulin, is known to slow diabetic patients’ disease progression. Does it also reduce health care utilization and cost in the short run?

**METHODS:** Medical, pharmacy, and laboratory claims for 369 type-II diabetes patients enrolled in a single managed care plan were evaluated. Patients were continuously eligible for at least two years between June, 2001 and June, 2004. Separate variables were computed for each year. The propensity score (PS) calculated with classification and regression trees (CART) was used to calculate the probability of receiving insulin treatment, using year one health status, demographics, and HgA1c laboratory values. These probabilities were then used as weights in the regression of total health care costs and ambulatory costs in year two on an array of variables including insulin use.

**RESULTS:** Insulin treatment does not benefit all groups of patients equally. Patients over the age of 60 benefit significantly from insulin treatment with a reduction in total health care cost of 60.5% (p = 0.0007) and a reduction in ambulatory cost of 60.9% (p = 0.0008) compared to younger diabetic patients (age < 60).

**CONCLUSION:** Diabetic patients age 60 or above and the health care payers would greatly benefit from better glucose control through insulin treatment.

**PDB30**

**TREATMENT PATTERNS AMONG PATIENTS WITH DIABETES ON METFORMIN AND SULFONYLUREA COMBINATION THERAPY**

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**OBJECTIVES:** Diabetes is a progressive disease that often requires periodic intensification of treatment to control hyperglycemia. The objective of this study is to evaluate therapy changes after initiation of metformin and sulfonylurea combination therapy. **METHODS:** This was a retrospective analysis of data derived from the IMS Medplus UK primary care database. Patients were selected using the following criteria: type-2 diabetes diagnosis, age ≥30 years at diagnosis, initiation of OHA combination with MF and SU between January 1, 1997 and March 31, 2003. Patients with prior insulin prescription were excluded. **RESULTS:** A total of 6616 patients were included, with a mean age of 62.82 years (±12.12) and 56.3% of male; 2603 patients (39.39%) had a history of macrovascular events and dyslipidemia (59.89%) were also common among these patients. The average follow-up was about 36.7 months. After three years of initiating metformin and sulfonylurea combination therapy, 54.8% had changed their therapy, either by discontinuing one or both initial agents, adding a third oral agent or receiving insulin. No patient remained on the initial combination after 6.5 years. Approximately 8–11% of patients changed therapy every six-months during the first five-years. By the end of two years, about 14.1% have required insulin therapy and 10% had switched to another OHA combination therapy. Approximately 46.9% of patients were prescribed insulin therapy after seven-years. **CONCLUSION:** In this cohort of diabetic patients managed by GPs in the UK, a large number of patients require additional oral anti-hyperglycemic agents or insulin to manage their hyperglycemia. More effective therapies are needed in order to better manage these patients.

**PDB31**

**FACTORS ASSOCIATED WITH HEALTH CARE COST SAVING IN PATIENTS WITH DIABETES TO THE CALIFORNIA MEDICAID POPULATIONS (MEDI-CAL)**

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**OBJECTIVE:** To investigate factors associated with health care cost saving in patients with diabetes to the California Medicaid Populations (MEDI-Cal). **METHODS:** A retrospective study was conducted by using claims data from January, 1995 to December, 2000. Dependent variable was total health care cost. Historical data including demographic factors, health care cost and utilization, diabetes drug treatment, follow-up services based on diabetic guidelines, medication compliance, complications, and comorbidities were used as independent variables. The generalized estimating equation method was used to analyze the panel data.

**RESULTS:** Various factors have a significant association with health care cost savings to MediCal. Patients taking both insulin and oral hypoglycemic drugs or patients having drug dose increased had health care costs higher by $1210 and $141, respectively. Patients having oral hypoglycemic or insulin, anti-hypertensive, or lipid lowering drugs added also had health care costs higher by $264, $528, or $199, respectively. In addition, patients having drugs changed to different classes or to insulin had health care costs higher by $1018. However, patients having one percent of medication compliance increased had health care costs lower by $7 in next six-month period. Moreover, patients having office visits based on diabetic guidelines or patients having glucose monitoring strip had health care costs lower by $730 or $258 in next six-month period, respectively. In addition, patients having lab tests [e.g., HbA1C test every six-months ($121), cholesterol check up every year ($472), or dilated eye check-up every year ($260)] could lower costs in the future.

**CONCLUSIONS:** Medi-Cal policy makers may implement some disease management programs or health policy on patients who have drug treatment problems and patients without follow-up services based on diabetic guidelines in order to improve patient outcomes and decrease health care costs in the future.

**PDB32**

**THE RELATIONSHIP BETWEEN PATIENT’S TYPE OF PAYMENT AND PRESCRIPTION DRUG COSTS FOR DIABETIC PATIENTS**

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**OBJECTIVE:** To examine the relationship between patient’s payment type and prescription drug costs for diabetic outpatients at a regional hospital in southern Thailand. **METHODS:** Patient’s profile and prescription for 1454 outpatients who used anti-diabetic drugs between August and September 2002 were collected. The patient’s type of payment was divided into two groups, which were patients who paid out-of-pocket and patients who did not pay for their prescriptions. Descriptive and linear regression analyses were used to examine the relationship. **RESULTS:** Results showed that average drug costs per prescription between patients who paid out-of-pocket and patients who...