to compare medical costs in a managed care setting for individuals with the following diagnoses: diabetes mellitus (DM), hypertension (HYP), and hypercholesterolemia (HC). In so doing, this research will allow payers to understand the comparative resource implications of these common conditions. METHODS: Data from the t3 LabRx Database were used for this study. Adult patients who were diagnosed with DM (N = 2,815), HYP (N = 6,073), or HC (N = 11,442) were included in the study. Differences among the three groups were examined using chi-square statistics for categorical variables and t-statistics for continuous variables. Two-year cost comparisons among the cohorts were conducted using a multivariate regression that controlled for patient characteristics, general health status and comorbid conditions. RESULTS: Compared to the DM cohort, the HYP cohort was significantly older and less likely to be male, while the HC cohort was more likely to be male. Individuals diagnosed with HYP or HC had significantly lower total direct two-year medical costs compared to those in the DM cohort ($4,388, p < 0.0001; and $9,062, p < 0.0001 respectively) as well as significantly lower inpatient costs ($3,640, p < 0.0001; $13,463, p < 0.0001), and outpatient prescription drug costs ($1,518, p < 0.0001; $2,823, p < 0.0001). In addition, patients in the HYP or HC cohorts were found to have significantly lower disease-specific total direct two-year medical costs ($1017, p < 0.0001; $4941, p < 0.0001, respectively) compared to individuals in the DM cohort. CONCLUSION: Results from this study indicated significant differences in demographic characteristics and comorbidities among individuals diagnosed with DM, HYP, or HC. These differences translated into significant cost differences, with patients diagnosed with DM experiencing both higher total medical costs and higher disease-specific medical costs than individuals diagnosed with either HYP or HC.

THE COST-EFFECTIVENESS OF PIOGLITAZONE COMPARED WITH ROSIGLITAZONE: AN ECONOMIC EVALUATION PROJECTING RESULTS FROM A CLINICAL STUDY INTO THE FUTURE USING A VALID AND RELIABLE ECONOMIC MODEL FROM A THIRD PARTY PAYER PERSPECTIVE IN THE USA

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OBJECTIVES: Thiazolidinediones (TZDs) were first introduced in the late 1990s as adjunctive oral therapy for patients with type 2 diabetes mellitus (T2DM). The comparative economic values of TZD therapeutic options currently available in the US marketplace are not well characterized. We estimated the cost-effectiveness of pioglitazone compared with rosiglitazone in treating T2DM consistent with AMCP cost-effectiveness guidelines. METHODS: Clinical efficacy and baseline parameters were taken from Goldberg RB et al, 2005, and entered into a previously validated, Markov-based economic model for T2DM. The model was used to project long-term improvements in clinical and economic outcomes comparing pioglitazone with rosiglitazone. A series of Markov constructs simulated the progression of diabetes-related complications (cardiovascular, neuropathy, renal, and ophthalmic). Transition probabilities and HbA1c-dependent adjustments were derived from published epidemiological studies. Mean baseline HbA1c was comparable (7.6% for pioglitazone, 8.04% for sitagliptin). Costs of diabetes complications were taken from published sources. Drug acquisition costs for pioglitazone and sitagliptin were assumed to be $4.91/day and $4.86/day, respectively (WAC prices, 2007), and remained constant. A time horizon of 35 years was used, with costs and clinical outcomes discounted at 3% per annum. Univariate sensitivity analyses were conducted to test robustness of the base case cost-effectiveness ratio scenarios. RESULTS: The incremental life-years and quality-adjusted life years gained for pioglitazone versus rosiglitazone were 0.180 and 0.129 years, respectively, at an overall increased cost of $3241 per patient over the simulation period. Therefore, the incremental cost-effectiveness ratios were $17,981/LY and $25,219/QALY gained, respectively, in our base case analysis. One-way sensitivity analyses demonstrated that with variation in key input parameters (discount rates, HbA1c, lipid effects, etc.; cost-effectiveness findings were most sensitive to changes in HbA1c and high density lipoprotein (HDL) effects. CONCLUSION: Our economic modeling analysis suggests that pioglitazone delivers superior economic value when compared to rosiglitazone due to improved clinical outcomes specifically related to HDL effects.