OBJECTIVES: Racial disparities in diabetes exist in diabetes control, as well as complications associated with diabetes. Such disparities could lead to differences in the likelihood of hospitalization among different races. This study examined the association between patients’ race and hospitalization in type 2 diabetes patients newly starting oral antidiabetic therapy. METHODS: This was a retrospective cohort study of Medicaid insured patients with type-2 diabetes newly starting oral antidiabetic medication (metformin, sulfonylureas, thiazolidinediones). A cohort of type 2 diabetes patients was identified using ICD-9 code (250.xx) and 1 National Drug Code for antidiabetic medication. Information for demographic factors (race, age of patient, gender of the patient), clinical factors (severity of diabetes, number of comorbidities), medication-related factors (number of medications consumed), and access to care (number of diabetes-related physician visits) was extracted from the database. Patients’ race was categorized as African Americans, Whites and Others. Hospitalization was measured as a categorical dichotomous variable. Patients were followed up for one year after the index date of new medication. Multiple logistic regression for three cohorts was performed to assess the association patients’ race and likelihood of hospitalization adjusting for above-mentioned factors. RESULTS: Among metformin users (n = 215), there was no difference in the likelihood of hospitalization between races. Among sulfonylureas users (n = 1171), there was no difference in the likelihood of hospitalization between races. Among thiazolidinedione users (n = 1751), African Americans were associated with 39% increased likelihood of hospitalization compared to whites (OR: 1.39, 95% CI: 1.07–1.81). Number of medications and comorbidities were found to be significant predictors in each of the analyses. CONCLUSION: Racial differences in hospitalizations among thiazolidinediones users should be investigated to understand other factors that contribute to hospitalization in this group. Avoiding hospitalization among these patients would generate considerable cost savings.

DIABETES—Cost Studies

BUDGET IMPACT ANALYSIS OF PIOGLITAZONE FOR DIABETES IN TAIWAN: A RETROSPECTIVE DATABASE ANALYSIS

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OBJECTIVES: To conduct a cost-benefit analysis (CBA) for inhaled drug delivery system for insulin (INI). METHODS: Previously, we reported the average monthly willingness-to-pay (WTP) for INI from diabetic patient (Cdn$153.70 ± $99.90) and general population (Cdn$68.59 ± $44.65) perspective in Canada. This study estimates the net benefit and cost-benefit ratio for INH from both patient and general population perspective. The average cost of insulin therapy using subcutaneous insulin injection (SCI) was calculated equal to Cdn$32.40 per month based on average 40 units daily usage of rapid acting insulin for bolus insulin supplement. The cost of self-injection was approximately Cdn$8.40. One form of INI is available using powder form of insulin and a liquid inhaler is under development. The average daily cost of inhaled delivery system for insulin is approximately 40% higher than SCI. Using the same price premium ratio we estimated the average monthly cost of INI in Canada equal to Cdn$45.36 (when being available). The cost of basal insulin and self-blood-glucose monitoring was considered equal. RESULTS: In the base-case scenario, the net benefit of INI when compared to SCI was Cdn$90.74 per month from the diabetic patient perspective and Cdn$5.63 from the general population perspective. The cost-benefit ratio (CBA—calculated as ÂCost/ÂWTP) from the patient (0.12) and the general population (0.69) perspective were <1, suggestive of a positive CBR for INI. Extensive sensitivity analysis was performed by changing variables (set apriori) including INI price (+10%, 20%) and daily usage of insulin units (+10%, 20%). Results of the analysis were robust to the changes in variables. CONCLUSION: This analysis demonstrated that the benefits of inhaled delivery system for insulin for control of blood glucose levels in diabetic patients are greater than the costs, therefore The rapy provide a positive net benefit from both patient and general population perspective and is a good investment for money.

COST-BENEFIT ANALYSIS OF INHALED INSULIN: A CANADIAN PERSPECTIVE

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OBJECTIVES: To conduct a cost-benefit analysis (CBA) for inhaled drug delivery system for insulin (INI). METHODS: Previously, we reported the average monthly willingness-to-pay (WTP) for INI from diabetic patient (Cdn$153.70 ± $99.90) and general population (Cdn$68.59 ± $44.65) perspective in Canada. This study estimates the net benefit and cost-benefit ratio for INH from both patient and general population perspective. The average cost of insulin therapy using subcutaneous insulin injection (SCI) was calculated equal to Cdn$32.40 per month based on average 40 units daily usage of rapid acting insulin for bolus insulin supplement. The cost of self-injection was approximately Cdn$8.40. One form of INI is available using powder form of insulin and a liquid inhaler is under development. The average daily cost of inhaled delivery system for insulin is approximately 40% higher than SCI. Using the same price premium ratio we estimated the average monthly cost of INI in Canada equal to Cdn$45.36 (when being available). The cost of basal insulin and self-blood-glucose monitoring was considered equal. RESULTS: In the base-case scenario, the net benefit of INI when compared to SCI was Cdn$90.74 per month from the diabetic patient perspective and Cdn$5.63 from the general population perspective. The cost-benefit ratio (CBA—calculated as ÂCost/ÂWTP) from the patient (0.12) and the general population (0.69) perspective were <1, suggestive of a positive CBR for INI. Extensive sensitivity analysis was performed by changing variables (set apriori) including INI price (+10%, 20%) and daily usage of insulin units (+10%, 20%). Results of the analysis were robust to the changes in variables. CONCLUSION: This analysis demonstrated that the benefits of inhaled delivery system for insulin for control of blood glucose levels in diabetic patients are greater than the costs, therefore The rapy provide a positive net benefit from both patient and general population perspective and is a good investment for money.

DIRECT AND INDIRECT COSTS AND RESOURCE UTILIZATION ASSOCIATED WITH PHOTOCOAGULATION AND VITRECTOMY PROCEDURES AMONG EMPLOYEES WITH DIABETIC RETINOPATHY

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