and compare the economic costs and clinical outcomes associated with ranibizumab monotherapy versus laser photocoagulation alone for the treatment of DME in Canada. METHODS: Cost-effectiveness of ranibizumab to a Canadian healthcare system was analyzed using a Markov model based on data from the RESTORE clinical trial. In the Markov model, the RESTORE treatment pathway, the RELATIVE, treatment, the RETREAT, and the RESOLVE trials were linked to the model, with each trial contributing to the transition rates between health states. The Markov model was used to simulate the long-term outcomes of patients with DME treated with laser photocoagulation or ranibizumab. RESULTS: The life expectancy of patients treated with ranibizumab was 0.06 year longer than those treated with laser photocoagulation. The incremental cost-effectiveness ratio (ICER) of ranibizumab compared to laser photocoagulation was $145,722 per quality-adjusted life year (QALY) gained. CONCLUSIONS: Compared to laser photocoagulation, ranibizumab monotherapy shows cost-effectiveness within commonly accepted cost per QALY thresholds. In addition, this analysis predicts the use of ranibizumab for DME will result in more years without legal blindness.

PDB34 EVALUATING THE COST-EFFECTIVENESS OF SWITCHING FROM INSULIN GLARINE TO INSULIN DETMIR IN PATIENTS WITH TYPE-2 DIABETES IN A CHINESE SETTING: A MODELING STUDY BASED ON THE PREDICTIVE STUDY

OBJECTIVES: To evaluate the long-term health and economic outcomes of Insulin Detmir (IDet) therapy in uncontrolled patients with type 2 diabetes mellitus (T2DM) compared to Insulin Glarine (IGlar) in the Chinese setting. METHODS: The published and validated CORE Diabetes Model was used to make the long-term (30 years) projection of health economic outcomes. The patient demographic information and clinical endpoints were derived from South Korea sub-analysis of the PREDICTIVE trial. The study was a large, multi-centre, 6 months observational study assessing the safety and efficacy of IDet. HbA1c was reduced of 0.2 % (p<0.05) by switching from IGlar to IDet. Baseline risk factors and racial characteristic data were obtained from Chinese cohort studies. The market retail prices of medications were calculated to estimate treatment costs. The diabetologist management and complications costs were obtained from Chinese published data and adjusted to 2010 values using the Chinese Consumer Price Index. An annual discounting rate of 3% was used for both health and economic outcomes. One-way sensitivities analysis was performed. RESULTS: The treatment of IDet converted from IGlar was projected to reduce the cumulative incidences of DM-related complications. Background retinopathy, end-stage renal disease, ulcer, myocardial infarction events were reduced 0.85%, 1.85%, 2.0%, 0.2% respectively. Therapy conversion to IDet was projected to improve life expectancy by 0.061 year, and was associated with improvements of 0.484 quality adjusted life year (QALY). The costs of complications were reduced by CNY 5,595, resulting in a total direct medical cost saving of CNY 2,869. CONCLUSIONS: Therapy conversion from IGlar to IDet in T2DM patients could delay the onset of diabetes complications, was associated with improved quality of life, and reduced direct cost over patient lifetimes. IDet was shown to be a dominant treatment option in patients with T2DM inadequately controlled with IGlar in Chinese setting.

PDB35 PHARMACOECONOMIC EVALUATION OF A PHARMACIST-MANAGED DIABETES CLINIC

OBJECTIVES: The aim of this research was to assess the cost-effectiveness of pharmaceutical care (PC) programme (relative to control) for patients with type 2 DM. METHODS: A total of 222 patients were recruited at a pharmacist-managed diabetes clinic of a government hospital in Malaysia and randomly allocated to intervention and control group. Patients in the intervention group (n = 111) were provided with PC, whereas patients in the control group (n = 111) received usual pharmacy service. Clinical and economic outcomes of patients were evaluated at baseline and after six months. RESULTS: There was no significant difference in the demographic and clinical characteristics at baseline between the intervention and the control group. Significant reduction in glycosylated haemoglobin (HbA1c) was observed from baseline to 6-month in the intervention group. Mean ± standard deviations was 9.93 ± 1.76 versus 8.83 ± 1.85%, p < 0.05. Although the total costs per patient were significantly higher for the intervention group ($961.07 versus $542.64, p = 0.014), the cost effectiveness ratio was lower in the intervention group (1.85% versus 2.02%). The incremental cost-effectiveness ratio for HbA1c was $145,722 per QALY. CONCLUSIONS: In conclusion, incorporation of PC into the management of type 2 DM can have a definitive, positive impact on glycaemic control and lead to more cost-effective treatment.

PDB36 METABOLIC SYNDROME VERSUS ALTERNATIVE ORAL ANTIDIABETIC DRUGS ON HOSPITALIZATIONS AND COSTS

OBJECTIVES: Quick release (QR)-bromocriptine mesylate is a new treatment for type 2 diabetes (T2DM) that has been shown to reduce HbA1c and cardiovascular (CV)-related hospitalizations over one year. The objective of this study was to estimate the economic impact of QR-bromocriptine (QR) versus other oral antidiabetic drugs as add-on therapy for patients who failed initial treatment. METHODS: A decision-analysis model was designed to compare outcomes among QR-bromocriptine, pioglitazone, rosiglitazone, and sitagliptin over one year when used as add-on therapy to basal insulin. In each drug, HbA1c, CV-related hospitalizations, and CV-related complications were derived from product labels and used to derive the expected number of hospitalizations for diabetes-related complications based on published equations linking HbA1c levels to hospitalizations. Rates of CV-related events (major adverse cardiac events, congestive heart failure, angina, and revascularization) were extracted from clinical trial reports of antidiabetic drugs in T2DM and were expressed on an annualized basis. Hospital costs per admission were estimated from the Healthcare Cost & Utilization Project, while drug costs were based on wholesale acquisition cost. A payer perspective was assumed and direct medical costs were expressed in 2009 USD. RESULTS: Patients treated with QR-bromocriptine had lower diabetes-related hospitalization costs ($2,017) than those receiving rosiglitazone ($2,038), and higher costs compared to pioglitazone ($1,928) and sitagliptin ($1,989). Patients receiving QR-bromocriptine had lower hospitalization costs ($420) compared to those treated pioglitazone, sitagliptin, or rosiglitazone ($523, $708, and $729, respectively). Annual drug costs were lower for patients receiving QR-bromocriptine ($2,122) compared to pioglitazone ($2,605) and sitagliptin ($2,282) and higher than for those receiving rosiglitazone ($1,977). Overall one-year costs were estimated to be $8,565, $9,056, $9,789, and $7,445 for QR-bromocriptine, pioglitazone, sitagliptin, and rosiglitazone respectively. CONCLUSIONS: Our findings suggest that, over one year, T2DM patients treated with QR-bromocriptine as an add-on therapy are expected to have lower costs than those receiving pioglitazone, sitagliptin, and rosiglitazone.

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PDB37 MAIL-ORDER PHARMACY USE AND MEDICATION ADHERENCE AMONG MEDICARE PART D BENEFICIARIES WITH DIABETES

OBJECTIVES: To examine medication adherence among Medicare Part D beneficiaries with diabetes and explore whether there is any association using mail-order pharmacy (vs. retail pharmacy) with better adherence in this patient population. METHODS: Using administrative pharmacy claims data, we conducted a retrospective cohort study on the Medicare Part D beneficiaries who newly initiated oral anti-diabetic treatment between January 1, 2008 and December 31, 2008. The primary outcome of interest was medication adherence to oral anti-diabetics during the benefit year of 2009, which was measured using the proportion of days covered (PDC). Mail-order pharmacy users were matched to retail pharmacy users via propensity score matching controlling for the demographic characteristics. RESULTS: A total of 22,546 patients with diabetes were identified. The average PDC was 0.60 and 41.6% of the study population was adherent (defined as PDC≥0.8) with oral anti-diabetic medications during calendar year 2009. The matched sample included 1361 patients from each cohort. Compared with the retail pharmacy