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 KESTORE clinical trial. All medical care services, including those provided in the settings of the primary, secondary, and tertiary care settings were included in the analysis. The KESTORE study, the RESTORE study, and all health state utilities were derived from the RESTORE study. From year 2 onwards, health state transitions were based on fixed probabilities of improving or worsening BCVA. Resource use and costs were collected from the RESTORE trial, published literature, and standard Canadian sources. RESULTS: Compared to laser photocoagulation, patients receiving ranibizumab monotherapy accrued an additional 1.14 years without legal blindness (BCVA ≥ 0.5 letters). Also, patients receiving ranibizumab accrued an additional 0.19 quality-adjusted life years (QALYs) with a total incremental cost of approximately $8,500, resulting in approximately $44,000 per 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.

PDB35 EVALUATING THE COST-EFFECTIVENESS OF SWITCHING FROM INSULIN GLARGINE TO INSULIN DETEMIR IN PATIENTS WITH TYPE-2 DIABETES IN A CHINESE SETTING: A MODELING STUDY BASED ON THE PREDICTIVE STUDY

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OBJECTIVES: To evaluate the long-term health and economic outcomes of Insulin Detemir (IDet) therapy in uncontrolled patients with type 2 diabetes melitus (T2DM) compared to Insulin Glargine (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 by 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 drug costs. The model calculated the treatment 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 sensitivity 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 0.65%, 0.40%, 0.24%, 0.48% 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 a gain in QALYs 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.

PDB36 PHARMACOECONOMICAL EVALUATION OF A PHARMACIST-MANAGED DIABETES CLINIC

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OBJECTIVES: The aim of this research was to assess the cost-effectiveness of pharmacist managed diabetes 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 the 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 = 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 ($9,567 versus $8,045, p < 0.014), the cost effectiveness ratio was lower in the intervention group ($150.15 versus $167.63). The reduction in HbA1c level and associated incremental cost-effectiveness ratio for HbA1c was $154.72. 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 treatments.

PDB37 UTILIZATION OF PHYSICIAN, NURSING AND DIETICIAN SERVICES BY TYPE 2 DIABETIC PATIENTS ATTENDING PRIMARY CARE CLINICS IN SINGAPORE

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OBJECTIVES: Physicians, Nursing Care Managers (CMs) and Dieticians are part of the healthcare team looking after patients with diabetes mellitus at the public sector primary care clinics in the National Healthcare Group (NHG) in Singapore. This paper studies the association between the level of glycaemic control and the utilization of professional health services by type 2 diabetes mellitus (T2DM) patients at these clinics. METHODS: This study included all patients with T2DM who had attended the same clinic in 2009 for at least 12 months for the treatment of diabetes. Data was extracted from the NHG Diabetes Registry (CDMS). The number of outpatient clinic visits to the Physicians, CMs and Dieticians in a year was compared by age and degree of glycaemic control using the mean glycated haemoglobin (HbA1c) for the year, “Optimal” being <7%, “Acceptable” 7%-9% and “Poor” 9%+. RESULTS: There were 58,057 T2DM patients with more females (54%) and disproportionate number fewer Chinese (16.5%) in the NHG diabetes population. Mean HbA1c was 7.42 ± 1.27% which decreased gradually with age from 8.16% (<40 years) to 6.86% (90+ years). The annual Physician attendances for diabetes consultation increased from 4.1 ± 1.5 (“Optimal” HbA1c control) to 5.2 ± 2.2 (“Poor” control) for the following years: 85-89%. CMs attendance for diabetes patients seen by the CMs increased from 6.8% (“Optimal” control) to 52.5% (“Poor” control), and similar for Dieticians, an increase from 1.3% (“Optimal”) control to 9.5% (“Poor” control). CONCLUSIONS: T2DM patients with “Optimal” glycaemic control had significantly fewer clinic visits to the healthcare team than those with “Poor” control, translating to lower overall healthcare costs for the patients and the healthcare system. More attention is needed to improve the care of the patients with “Poor” glycaemic control, in order to achieve better long-term health outcomes and reduce healthcare utilization and costs.

PDB38 AN ECONOMIC MODEL OF THE EFFECTS OF QUICK RELEASE BROMOCRYPTINE MYSLETYL VERSUS ALTERNATIVE ORAL ANTIDIABETIC DRUGS ON HOSPITALIZATIONS AND COSTS

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OBJECTIVES: Quick release (QR) -bromocryptine 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-bromocryptine 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-bromocryptine, pioglitazone, rosiglitazone, and sitagliptin over one year when used as add-on therapy. In each drug group, HbA1c level and hospitalization costs 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 results and associated hospital costs in T2DM 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-bromocryptine had lower diabetes-related hospitalization costs ($2,017) than those receiving rosiglitazone ($2,038), and higher costs compared to pioglitazone ($1,928) and sitagliptin ($1,969). Patients receiving QR-bromocryptine had lower expected hospitalizations ($460), whereas those treated pioglitazone, sitagliptin, or rosiglitazone ($523, $708, and $792, respectively). Annual drug costs were lower for patients receiving QR-bromocryptine ($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 $8,465, $8,056, $4,979, and $4,745 for QR-bromocryptine, pioglitazone, sitagliptin, and rosiglitazone respectively. CONCLUSIONS: Our findings suggest that, over one year, T2DM patients treated with QR-bromocryptine as an add-on therapy are expected to have lower costs than those receiving pioglitazone, sitagliptin, and rosiglitazone.

Diabetes/Endocrine Disorders – Patient-Reported Outcomes & Preference-Based Studies

PDB39 MAIL-ORDER PHARMACY USE AND MEDICATION ADHERENCE AMONG MEDICARE PART D BENEFICIARIES WITH DIABETES

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OBJECTIVES: To examine medication adherence among Medicare Part D beneficiaries with diabetes and explore whether there is any association of 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, controlling for demographic and diabetes-related characteristics. RESULTS: A total of 22,546 patients with diabetes were identified. The average PDC was 0.60 and only 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