PDB27

COST-EFFECTIVENESS ANALYSIS OF METFORMIN COMBINED WITH SAXAGLIPTIN VERSUS METFORMIN COMBINED WITH SULFONYLUREAS IN TYPE-2 DIABETES PATIENTS IN CHILE

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OBJECTIVES: To determine the cost-effectiveness relation of adding Saxagliptin to Metformin therapy (SAXA+MET) compared to adding Sulfonylureas (SULF+MET), in patients with type 2 diabetes mellitus (DM2) who have failed to achieve adequate glycemic control with metformin. **METHODS:** A discrete event simulation model (Cardiff long term cost-utility model) with a fixed time increase based on UKPDS 68 was used to simulate disease progression and to obtain an estimate of the treatment's economic and health consequences in DM2 patients. Clinical efficacy parameters for Saxagliptin were obtained from the literature; drug acquisition costs, adverse events (AEs) and microvascular and macrovascular complications were taken into account. The time horizon was 20 years and the perspective was that of the public health care system in Chile. Costs were expressed in US dollars (2009), with an annual 3.5% discount. **RESULTS:** A lower number of non-fatal events were found for the SAXA+MET-treated group versus the SULF+MET-treated group. Additionally, the model predicted a lower number of fatal macrovascular (132.3 vs. 136.0) and microvascular (19.6 vs. 19.7) events for the SAXA+MET-treated group vs. the SULF+MET-treated group. The total cost of the SAXA+MET cohort was lower than the SULF+MET cohort: US$ 15.006.011 and U$S 14.557.581, respectively. Treatment with SAXA+MET resulted in a higher number of QALYs (9,794 vs. 9,594) and LYs (23,068 vs. 23,019) for the 1000 patients' cohort than treatment with SULF+MET; the incremental analysis per QALY and LY gained was -US$2,243 and US$ −9,182 respectively (dominant). **CONCLUSIONS:** Results suggest that the addition of Saxagliptin to metformin therapy is dominant compared to the addition of sulfonylureas; therefore, this intervention would represent an efficient use of health resources for DM2 patients in Chile.

PDB28

COST SAVINGS IN TYPE-2 DIABETES (T2D) WITH INSULIN GLARGINE COMPARED WITH INSULIN DETEMIR IN THE UNITED KINGDOM

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OBJECTIVES: The objective was to determine whether the use of insulin glargine (IG, Lantus) could result in cost savings in comparison with insulin detemir (ID, Levemir) in T2D patients in the UK. **METHODS:** Clinical data for the analysis was taken from a 1 year multi-national study (Rosenstock 2008) in 582 insulin-naïve patients treated with IG or ID as add-on therapy to oral glucose lowering drugs. IG was administered once daily in line with it's licence and ID once (44% of patients) or twice daily (55%) according to treatment response. Mean daily insulin doses were 40U for IG and 71U for ID. Baseline characteristics were comparable on study entry. After 1 year glycaemic control, weight gain, adverse events and risk of hypoglycaemia were similar for both groups so a cost minimisation analysis was undertaken. Costs were calculated from a UK NHS perspective using MIMS November 2010 prices. Insulin cost was based on IG SoloStar and ID FlexPen prefilled disposable injection devices, which are of similar cost. It was assumed that a new needle, lancet and blood glucose test strip were used for each injection with a 2U priming dose of insulin before each injection. **RESULTS:** The annual cost per patient for needles was £43 for IG and £66 for ID. The cost of lancets and test strips was £122 for IG and £190 for ID. The annual cost of insulin was £426 for IG and £758 for ID. The total annual cost per patient of administering IG was £591 compared with £1014 for ID. Sensitivity analyses for weight gain, IG device and insulin dose confirmed the robustness of the base case results. **CONCLUSIONS:** IG may represent a more cost effective option for T2D patients in the UK requiring basal insulin analogue therapy with potential annual cost savings of 42% (£423/patient) compared with ID.

PDB29

DIRECT MEDICAL COST OF HYPOGLYCEMIA AMONG PATIENTS WITH TYPE-2 DIABETES IN THE UNITED STATES

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OBJECTIVES: Hypoglycemia is a common treatment related side effect of diabetes, which can be associated with frequent emergency room use and hospitalization. The objective of this study was to assess the direct medical costs of individual hypoglycemia events in a US population of type 2 diabetes. **METHODS:** Patients >18 years with type 2 diabetes diagnosed during the period 2003 to 2008 were selected from the *MarketScan® Research Databases* and followed from their first diabetes diagnosis in the study period until the end of continuous coverage or December 31, 2008, whichever came first. All individual hypoglycemia events identified by a claim (ICD-9-CM 250.3, 250.8, 251.0, 251.1, 251.2) on a unique date were counted for each patient. Direct medical costs were calculated per hypoglycemia event by treatment setting and diabetes drug regimen. **RESULTS:** A total of 2.4 million diabetes patients were selected. During follow-up, 91,595 of these patients experienced 169,248 hypoglycemia events. Costs were highest for hypoglycemia events identified in the emergency room (ER)-to-inpatient setting ($10,362/event), followed by inpatient ($7,317/event), ER ($701/event), and outpatient ($285/event) settings. Patients treated with an insulin only regimen had the highest direct medical costs of hypoglycemia ($9.49 per patient per month). Among patients treated with non-insulin regimens, the estimated hypoglycemia costs for patients on sulfonylureas were $3.87 per patient per month and $0.84 for other OADs. **CONCLUSIONS:** Direct medical costs associated with hypoglycemia among type 2 diabetes patients varied by treatment setting and drug regimen. Patients treated with insulin had the highest direct medical costs. Within non-insulin regimens, patients on sulfonylureas had higher costs than those on non-sulfonylurea OADs. Treatment strategies that provide effective glycemic control, with a lower potential for inducing hypoglycemia should be considered in the management of type 2 diabetes.

PDB30

A CROSS-SECTIONAL SURVEY ON ECONOMIC BURDEN OF TYPE-2 DIABETES MELLITUS PATIENTS WITH ORAL ANTI-DIABETIC DRUGS THERAPY IN CHINA

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OBJECTIVES: The study assessed the economic burden incurred by type 2 diabetes mellitus (T2DM) patients with oral anti-diabetic drugs (OADs) therapy in China. **METHODS:** A cross-sectional survey was conducted between Dec 3rd, 2008 and July 31st, 2009 at 75 urban hospitals in 9 cities in China. A total of 9577 T2DM patients with OADs therapy completed the self-administered questionnaires during their clinical visits. The information collected from questionnaire included demographic characteristics, utilization of OADs, glycemic control, diabetes complications, annual direct medical costs and productivity lost associated with T2DM. **RESULTS:** The mean age (±SD) was 59.5±12.7 years, 51.1% were male and the mean diabetes duration (±SD) was 7.9±6.3 years. Only 7.9% and 15.3% of the patients achieved HbA1c<6.5%, and HbA1c<7.0% respectively. The average total medical expenditures was CNY 9127.2 per year, of which CNY 6478.5 was spent on T2DM. The annual expenditure of OADs was CNY 4279.4, accounting for 66.1% of the total annual T2DM treatment expenditure. The annual average diabetes-related costs for outpatient and hospitalization were CNY 5998.9 and 4265.8 respectively. T2DM patients diagnosed less than 3 years, 3-5 years, 5-10 years and more than 10 years had an annual average treatment cost of CNY 4783.0, 5829.5, 6248.4, and 8183.8 respectively. The average annual productivity lost due to T2DM was 29.9 working days. It resulted in an estimated average opportunity cost of CNY 2367.1 per capita (The 2008 average annual income of urban residents was CNY 28898). The direct treatment cost of T2DM and opportunity cost together accounted for 56% of patients' disposable income in 2008 (CNY 15781). **CONCLUSIONS:** The study demonstrated the high economic burden and inadequate glucose control among T2DM patients with OADs therapy. The direct medical cost of T2DM increases with disease progression. It highlights the importance of implementing cost-effective therapeutic regimens to improve diabetes management.

PDB31

BENEFITS AND COSTS OF CONDUCTING SPONSORED CLINICAL TRIALS IN A PUBLICLY FUNDED NEW ZEALAND HOSPITAL: PRE-TRIAL, TRIAL AND FOLLOW-UP

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OBJECTIVES: (1) To identify and analyse the benefits and costs of sponsored clinical trials in a publicly funded New Zealand hospital, from the perspective of (a) the research unit and (b) the district health board; (2) To identify patterns of costs and benefits during the pre-trial, trial and follow-up stages of a clinical trial. **METHODS:** We draw on the data relating to cases and controls in a health outcomes study of two phase III clinical trials to assess preventative medication for patients at risk of serious cardiovascular events. The data include Ministry of Health data, The Centre for Clinical Research and Effective Practice (CCRep) profit and loss statements, Counties Manukau District Health Board (CMDHB) Chronic Care Management data, trial protocols and data from a trial health outcome co-study. We identify patterns of costs and benefits during the enrolment, trial and follow-up stages of a clinical trial. **RESULTS:** The research unit and the health board both derive economic benefits from these trials. The magnitude of the benefits differs depending on the perspective taken. The research unit has total economic benefits ranging from US$470 and US$846 per participant which it is able to reinvest into other research projects. We find the benefits from the perspective of the health board are positive but small US $15 - $45 per participant over the eight year period. Savings from treatment cost avoidance are lower than anticipated. We find two periods where costs are highest (1) during enrolment and (2) at the end of the trial. **CONCLUSIONS:** There may be economic advantages in actively encouraging sponsored clinical trials within New Zealand publically funded hospitals. This study provides evidence of differing patterns of costs and benefits during the three stages of a clinical trial – enrolment, trial and follow-up.

PDB32

ECONOMIC EVALUATION OF RANIBIZUMAB FOR THE TREATMENT OF DIABETIC MACULAR EDEMA IN CANADA

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OBJECTIVES: Diabetic macular edema (DME) is an ophthalmologic complication that develops in a subset of patients with diabetic retinopathy and that causes loss of functionality, reduced health-related quality of life, visual impairment, and if left untreated, blindness. A cost-effectiveness analysis was conducted to measure