ASSESSING THE INFLUENCE OF INCORPORATING SECONDARY CARDIOVASCULAR EVENTS INTO A TYPE 2 DIABETES MELLITUS (T2DM) COST-EFFECTIVENESS MODEL

METHODS: Routine UK health data, between 2000 and 2005, were analyzed to quantify the cumulative incidence of first, second and third myocardial infarction (MI) or stroke and their first occurrence in T2DM subjects. Adjustments were made for out of hospital mortality and under-diagnosis of T2DM. Cardiovascular risk equations, used in a previously published cost-utility model, were re-calibrated, using the ratio of primary plus subsequent event to primary event, to predict subsequent MIs and strokes consistent with the observed UK data. The cost-effectiveness analysis compared two treatment strategies: A: 1st line metformin; 2nd line DPP-4 inhibitor add-on; 3rd line sulphonylurea add-on. B: 1st line metformin; 2nd line sulphonylurea add-on; 3rd line thiazolidinedione add-on. RESULTS: Of the 1,124,846 T2DM patients identified, 53,688 and 65,436 experienced primary MI and stroke events, respectively. These were 131 and 204 (1.00% and 0.23%) second and third MI admissions, and 3808 (8.88%) and 755 (0.12%) second and third stroke admissions, respectively. Modelled risk multipliers of 1.04 for MI and 1.1 for stroke were required to predict cumulative incidence consistent with the UK data. Incorporating subsequent events had little impact on the cost-utility analysis with the ICER decreasing from £3129 to £3120 per QALY gained per year. More noticeable was the impact on cost per life-year gained, which decreased from £257,902 to £90,055, with subsequent events included.

CONCLUSIONS: The inclusion of subsequent cardiovascular events in models of T2DM provides greater face validity but has little impact upon cost-effectiveness. Thus, economic assessments of therapies that modify glycemic control, using models that incorporate subsequent MI and stroke events, are not significantly based on expert opinion survey and official tariff lists for health care services paid by public payer (insurance company). All figures are shown in CZK and EUR (100 CZK = 3.94 EUR). RESULTS: QALYs gained with liraglutide 1.2 mg + SU vs. SU + rosiglitazone 4 mg by 0.236. Total direct costs increased by CZK 45,879 (£1800) resulting in incremental per patient cost of QALY of CZK 193,648 (£7623). The incremental cost-effectiveness ratio for liraglutide 1.8 mg + SU vs. SU + rosiglitazone 4 mg was estimated at CZK 378,762 (£14,923) per QALY gained (QALYs increased by 0.270). Total costs (including indirect costs) increased by CZK 44,028 (£1735) and CZK 100,301 (£3932) resulting in an incremental per patient cost of QALY gained of CZK 186,875 (£7347) and CZK 371,188 (£14,624), respectively. CONCLUSIONS: Treatment with liraglutide added a sulphonylurea is a cost-effective intervention compared with adding rosiglitazone and is likely to represent good value for money in the Czech Republic setting.

COST-EFFECTIVENESS OF PREGABALIN VERSUS USUAL CARE IN REFRACTORY OUT-PATIENTS WITH PAINFUL DIABETIC PERIPHERAL NEUROPATHY (PDPN) FOLLOWED IN PRIMARY CARE SETTINGS

OBJECTIVES: Estimate the cost-effectiveness (CE) of Pregabalin (PGB) and Usual Care (UC) in refractory outpatients with PDPN treated in usual medical practice in Primary Care settings in Spain. METHODS: Data extracted from a 12-week non-interventional study used for the CE analysis. Patients with PDPN refractory to UC or PGB, matched by age (<5 years), sex and pain intensity (±5 pts), refractory (40 VAS-PMPO) to previous treatments were selected. Patients could switch to PGB (monitoring/adj-on) or to UC other than PGB. Time horizon was 12 weeks. Effectiveness was expressed as number-adjusted life-years (NA-LYs). The CE analysis included the perspectives of the NHS and society (2006), with results expressed as incremental cost-effectiveness ratio (ICER). Bootstrapping techniques (10,000 samples) were used to obtain the probabilistic ICER, its 95% percentile confidence interval (CI) and the CE acceptability curve. Universe probability analysis was also performed. RESULTS: A total of 189 patients, 112 in PGB group and 77 in UC were identified. Compared with UC, PGB was associated with higher QALY gain; 0.046 ± 0.0343 versus 0.028 ± 0.0350 (P = 0.598). Although drug costs were lower for PGB (€62 ± 132 vs. €466 ± 0.0011, respectively), the difference was considered a minor issue. The ICER for PGB vs. UC other than PGB was €2,053 ± 1,259 vs. €1,259 ± €1,259; 0.0314 ± 0.0331 (P = 0.0573). CONCLUSIONS: This study suggests that using PGB to treat refractory out-patients with pPDPN in community medical practice in Spain is cost-effective compared to UC in majority of patients. It also highlights the burden of the disease and supports the availability of effective treatments available for patients not achieving pain relief from older therapies.