glycemic control, leading to a reduced incidence of diabetes-related complications, including renal disease, cardiovascular disease, ophthalmic and diabetic foot complications. Liraglutide was associated with increased direct costs (EUR 56,628 versus EUR 52,450), driven by the acquisition cost of liraglutide. However, this was partially offset by the reduced cost of treating diabetes-related complications. Based on these estimates, liraglutide was associated with an incremental cost-effectiveness ratio (ICER) of EUR 10,436 per QALY gained vs sitagliptin.

Conclusions: Liraglutide 1.8 mg was projected to improve clinical outcomes over sitagliptin as a result of reduced incidence of diabetes-related complications. Liraglutide is likely to be cost-effective from a health care payer perspective in Spain.

PDB70 COMPARING THE PROJECTED COST PER HBA1C REDUCTION OF EXENATIDE QW VERSUS LIRAGLUTIDE 1.8 MG FOR THE TREATMENT OF TYPE 2 DIABETES MELLITUS USING ALTERNATE DATA SOURCES

Wang X, Nguyen P, Farnback W1,2,3, Garrison L4,5
1Alliance Life Sciences, Somerset, NJ, USA, 2Bristol Myers Squibb, Plainsboro, NJ, USA, 3Crown Health Cooperative, Seattle, WA, USA, 4School of Pharmacy, University of Washington, Seattle, WA, USA

Objectives: Glucagon-like peptide-1 receptor agonists (GLP-1RAs), such as exenatide once weekly (EQW) and liraglutide (LIRA), are FDA-approved as treatment for type 2 diabetes mellitus (T2DM). Head-to-head studies and meta-analyses of these agents have reached different conclusions about their relative effectiveness. Methods: We developed a decision-analytic model to evaluate the likely incremental cost-effectiveness of EQW versus LIRA 1.8 mg in T2DM patients, with effectiveness measured as reduction in glycated hemoglobin (HbA1c). The model structure incorporates pharmacokinetics, pharmacodynamics (IC50 and human gonadotropins), drugs used for male infertility due to hormonal disorder hypogonadotropic hypogonadism (HH), whose female partner has or doesn’t have infertility problems, in dual therapy in critical care units in The Netherlands[1]. A Markov model including health states ‘target glucose’, ‘hyperglycemia’, ‘hypoglycemia’, and hospital death was developed to compare expected costs, number of patients within target and number of life years saved after implementation of the strict glycemic control guideline reduces hospital costs with 1.321 and 2.175 patients 12 and 24 months after and before implementation of the guideline, respectively. The number of BP-POCT increased from 4.2 (2.6 – 6.7) to 8.7 (4.1 – 11.2) per patient per day. Costs for BP-POCT increased with 1.8%. When taking in total hospital costs and clinical effects into account, implementation of the strict glycemic control guideline reduces hospital costs with €134 during total inpatient stay, as patients spend less time in hypoglycemic and hypoglycemic events and had shorter stays in ICU and hospital (–0.5 and –1.1 day, respectively). This translates into expected cost savings of €13 per additional patient target glucose and €10 additional life year saved. The model outcomes are most sensitive to changes in ICU length of stay. Conclusions: This health-economic analysis shows that additional costs of BP-POCT with implementation of a strict glucose control guideline are offset against savings generated by reduced hypoglycemic events and length of stay in ICU and hospital. [1] Schultz, M., et al. Minerva Anestesiol. 2012. 78(9): p. 982-95.

PDB74 COST-EFFECTIVENESS OF SWITCHING TO BISPHASIC INHUM AN INSULIN ASPART IN PEOPLE WITH TYPE 2 DIABETES MELLITUS IN CHINA

Xiao J1, Rian X2, Zhang Y3, Yang L4
1China-Japan Friendship Hospital, Beijing, China, 2Ruijin Hospital (Luwan), Shanghai, China, 3China University of Chinese Medicine, China, 4Twins Medical (China) Pharmaceuticals Co., Ltd., Beijing, China

Objectives: To evaluate long-term cost-effectiveness of switching from human premix insulin to biphasic insulin aspart (BIAsp 30) in people with type 2 diabetes mellitus (T2DM) in China. Methods: The previously published and validated IMS Core Diabetes Model was used to project life expectancy, quality-adjusted life years (QALYs) and total direct medical costs over 30 years from a societal perspective. Patient characteristics and treatment effects were obtained from Chinese subgroup (n=1191) in the A.chieve® observational study. After treatment with BIAsp 30 over 24 weeks, patients’ HbA1c decreased by 1.6%, rate of major and minor hypoglycemia decreased by 0.51 and 4.32 events per patient-year respectively. Treatment costs were based on insulin doses (35.8 IU daily for human premix insulin and 36.1 IU for BIAsp 30) and market price in China. Management (comanagement medications, screening programmes, etc) and complication costs were obtained from Chinese published data in 2011 and adjusted to the price level of 2012 with the consumer price index. Costs and life years are discounted at 3% annually. One-way sensitivity analysis was performed. Results: Switching to BIAsp 30 from human premix insulin was projected to reduce incidence of most diabetes-related complications, increase life expectancy by 0.723 years (13.457 vs 12.725 ) and improve quality-adjusted life years by 1.032 QALYs (9.487 vs 8.455) per patient. Although treatment and management costs increased by Chinese Yuan (CNY) 14,712 (52,329 vs. 37,617) and an average QALY gain of 0.063. As add-on to insulin canagliflozin to insulin will be cost-effective compared with placebo. Adding canagliflozin to insulin will be cost-effective alternative to sulfonylurea in mono therapy.