PB44
HEALTH-ECONOMIC COMPARISON OF CONTINUOUS SUBCUTANEOUS INSULIN INFUSION VERSUS MULTIPLE DAILY INJECTIONS FOR THE TREATMENT OF ADULT TYPE 1 DIABETES IN KAZAKHSTAN
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OBJECTIVES: To project the long-term costs and outcomes of continuous subcutaneous insulin infusion (CSI) compared with multiple daily injections (MDI) in adult patients with Type 1 diabetes in KAZAKHSTAN. METHODS: The CORE Diabetes Model is a peer-reviewed, validated model, which employs standard Markov techniques to describe the long-term incidence and progression of diabetes-related complications. It was used to model a 52-week period of treatment for a cohort of adult patients with baseline characteristics and costs taken from primary data collection in KAZAKHSTAN (mean age 39.7 years, duration of diabetes 10 years and mean HbA1c 8.5%). Clinical outcomes (HbA1c and hypoglycemic events) were calculated from time horizon. A discount rate of 3% was applied to costs and benefits. All costs were updated to 2013. RESULTS: The primary analysis compared dapagliflozin with sulfonylurea-based regimens in 0.525 additional QALYs and 1.89% additional cost (cost-effectiveness ratio of 3.496/QALY). The higher drug cost of dapagliflozin was partially offset by lower costs of complications, hypoglycemia and the cost associated with weight gain. In the secondary analyses, dapagliflozin was a cost-effective option when compared with thiazolidinediones and DPP4, resulting in a cost per QALY gained of €20,183 and 487 respectively. The univariate and probabilistic sensitivity analyses confirmed the robustness of the results. CONCLUSIONS: Dapagliflozin in combination with metformin proved to be a cost-effective alternative compared to sulfonylureas, thiazolidinediones and PP4 inhibitors in the treatment of T2DM.

PB46
BLOOD GLUCOSE MONITORING SYSTEM IN ONE ITALIAN REGION
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OBJECTIVES: Diabetes is a chronic disease and associated with significant health and economic burden. Increasing costs are mainly related to long-term complications. Identifying patterns of hypoglycemia by means of a blood glucose monitoring system (BGMS) can be used to support diabetes management efficiently. METHODS: An economic analysis was carried out to estimate the life-time cost-effectiveness (CLE) of blood glucose monitoring system (BGMS) with pattern alert technology vs. standard BGMS for the prevention of Severe Hypoglycemia (SH) in insulin-treated type 1 (DM1) and type 2 patients (DM2). The cost-effectiveness analysis was based on a systematic literature review and indirect costs. Sensitivity analysis was performed using the Core Diabetes model and CLE at end of the simulation period was calculated. RESULTS: The decision tree was developed to calculate the incremental cost per additional quality of life. The RIA (Budget Impact Analysis) estimated the cost of using the core diabetes model. RESULTS: For the base-case scenario, the utilization of BGMS with pattern alert technology was less costly and more effective compared to standard BGMS. Lifetime costs savings for the DM1 option were 3,000.00 EUR/QALY gained versus standard BGMS. The incremental cost-effectiveness ratio was 0.17, which represents good value for money. CONCLUSIONS: BGMS with pattern alert technology, monitoring individual blood glucose levels are cost effective in preventing SH for DM1 and insulin-treated DM2 patients, as well as in determining blood glucose trends and avoidance of severe hypoglycaemia. Nevertheless, empirical data on the probability of reducing severe Hypoglycaemia is necessary in order to reach any firm conclusions.

PB49
INCREtin THERAPY FOR PATIENTS WITH TYPE 2 DIABETES IN SPAIN: A COST-EFFECTIVENESS ANALYSIS OF LIRAGlutide VS SITAglitinP
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OBJECTIVES: Diabetes mellitus represents a significant challenge to healthcare providers in Spain, with a national prevalence of over 8% and approximately 20,000 diabetes-related deaths annually. Treatment with GLP-1 receptor agonists and DPP-4 inhibitors have been shown to produce a beneficial effect on the metabolic control without the weight gain associated with traditional therapies. To evaluate the relative cost-effectiveness of incretin therapies, the present study compared the long-term cost and cost effectiveness of liraglutide and sitagliptin in type 2 diabetes patients in Spain. METHODS: Data were taken from a randomized, controlled trial (NCT00700817) in which adults with type 2 diabetes (mean age 55 years, HbA1c 7.7%, BMI 33kg/m2) failing metformin monotherapy were randomly allocated to receive either 1.8mg liraglutide or 50mg sitagliptin in addition to metformin. Liraglutide was associated with greater improvements from baseline HbA1c (–1.24% vs. –0.9%) and BMI (–0.99kg/m2 vs. –0.33kg/m2). Long-term projections of clinical outcomes and direct costs (2012 EUR) were made using a published and validated model of type 2 diabetes and assumed patients switched to insulin after five years. RESULTS: Liraglutide was associated with improved life expectancy (4.04 years vs. 3.91 years) and quality-adjusted life expectancy (0.94 quality-adjusted life years (QALYs) vs. 0.87 QALYs) compared to sitagliptin. Improved clinical outcomes were driven by improved glycemic control, leading to a reduced incidence of diabetes-related complications, including renal disease, cardiovascular disease, ophthalmic and diabetic foot complications. Mean savings as a result of avoided complications were EUR 1,827 per patient. Overall, liraglutide was associated with increased direct costs of EUR 2,297, yielding an incremental cost-effectiveness ratio of EUR 13,266 per QALY gained versus sitagliptin. CONCLUSIONS: Liraglutide was projected to improve life expectancy, quality-adjusted life expectancy and reduce incidence of diabetes-related complication. Liraglutide is likely to be cost-effective from a health care payer perspective in Spain.

PB50
HEALTH-ECONOMIC COMPARISON OF CONTINUOUS SUBCUTANEOUS INSULIN INFUSION VERSUS MULTIPLE DAILY INJECTIONS FOR THE TREATMENT OF TYPE 1 DIABETES IN KAZAKHSTAN CHILDREN
Baze G1, Demensinov A2, Zeitzin M1, Toktaraeva N1, Abdukhassanova G2, Sissamaliev R4, Capel M1, Demidov M1, Dunse N3, Markusov M6, Klets M2, Ivanov M2, Karamalis M3, Roze S1, Creu I Sant Pau, Barcelona, Spain, 2University of Pavia, Pavia, Italy, 3Johnson & Johnson, LifeScan EMEA, Zug, Switzerland, 4National Scientific Centre of Maternity and Childhood, Astana, Kazakhstan, 5Medtronic, Almaty, Kazakhstan, 6Medtronic, Tolochenaz, Switzerland.

OBJECTIVES: To project the long-term costs and outcomes of continuous subcutaneous insulin infusion (CSI) compared with multiple daily injections (MDI) in children with Type 1 diabetes in KAZAKHSTAN. METHODS: The Core Diabetes Model is a peer-reviewed, validated model, which employs standard Markov/Monte Carlo simulation techniques to describe the long-term incidence and progression of diabetes-related complications. It was used to model a 52-week period of treatment for a cohort of adolescent patients with baseline characteristics and costs taken from primary data collection in KAZAKHSTAN (mean age 11.9 years, duration of diabetes 4.5 years and mean HbA1c 8.5%). Clinical outcomes (HbA1c and hypoglycemic events) were calculated from time horizon. A discount rate of 3% was applied to costs and benefits. All costs were updated to 2013. RESULTS: The primary analysis compared dapagliflozin with sulfonylurea-based regimens in 0.525 additional QALYs and 1.89% additional cost (cost-effectiveness ratio of 3.496/QALY). The higher drug cost of dapagliflozin was partially offset by lower costs of complications, hypoglycemia and the cost associated with weight gain. In the secondary analyses, dapagliflozin was a cost-effective option when compared with thiazolidinediones and DPP4, resulting in a cost per QALY gained of €20,183 and 487 respectively. The univariate and probabilistic sensitivity analyses confirmed the robustness of the results. CONCLUSIONS: Dapagliflozin in combination with metformin proved to be a cost-effective alternative compared to sulfonylureas, thiazolidinediones and PP4 inhibitors in the treatment of T2DM.
Carlo simulation techniques to describe the long-term incidence and progression of diabetes. It was used to simulate disease progression in a cohort of pediatric patients with baseline characteristics taken from published KAZAKHSTAN studies (mean age 10.4 years, duration of diabetes 4.1 mean, HbA1c > 7.5%). Direct costs for 2013 were calculated from a third-party payer perspective. Discount rates of 5% per annum were applied to costs and 3% to clinical outcomes. RESULTS: Mean undiscounted life expectancy of patients using CSII vs. MDI was increased by 3.58 years. The Incremental-Cost-Effectiveness-Ratio (ICER) for CSII was 1.137.17 RUB and 5,549.85 RUB in glibenclamide and glimepiride groups, respectively. OBJECTIVES: To assess the cost-effectiveness of oral hypoglycaemic agents (micronized glibenclamide, gliclazide, glimepiride and repaglinide) in the treatment of type 2 diabetes mellitus. METHODS: Based on the data from comparative studies (8, 9), the model predicts disease progression and the number of cardiovascular events. Clinical inputs were derived from a systematic review and network meta-analysis of the United Kingdom Prospective Diabetes Study (UKPDS) equations, the model predicts disease progression and the number of cardiovascular events. Clinical inputs were derived from a systematic review and network meta-analysis of the United Kingdom Prospective Diabetes Study (UKPDS) equations, the model predicts disease progression and the number of cardiovascular events. Clinical inputs were derived from a systematic review and network meta-analysis of the United Kingdom Prospective Diabetes Study (UKPDS) equations, the model predicts disease progression and the number of cardiovascular events. Clinical inputs were derived from a systematic review and network meta-analysis of the United Kingdom Prospective Diabetes Study (UKPDS) equations, the model predicts disease progression and the number of cardiovascular events. Clinical inputs were derived from a systematic review and network meta-analysis of the United Kingdom Prospective Diabetes Study (UKPDS) equations, the model predicts disease progression and the number of cardiovascular events. Clinical inputs were derived from a systematic review and network meta-analysis. With new classes of T2DM medications offering weight reduction in type 2 diabetes, direct and indirect costs associated with the treatment of type 2 diabetes mellitus (T2DM) were compared. The outcomes of the study were compared with the current standard of care (MDI) and with the novel SGLT-2 inhibitor dapagliflozin (CANA) and the DPP-4 inhibitor sitagliptin (SITA). The model was calibrated using data from the DIA1001 trial, in which CANA 300mg reduced weight by ~5.7% versus GLIM over 52 weeks. HbA1c was assumed to drift annually by 0.14% for CANA (similar to metformin in ADOPIT), 0.24% for GLIM (as sulphonylurea in ADOPIT), and 0.15% for rescue therapy with insulin (initiated when HbA1c > 7.5%). (i) use of metformin was assumed, and four alternative weight-trajectory assumptions were tested: (A) weight change maintained permanently; (B) CANA weight reduction dis-appears fully at treatment discontinuation, GLIM weight-gain permanent; (C) GLIM weight-gain permanent, four (D) MDI weight-gain permanent; (D) weight changes disappear fully at discontinuation for both treatments. A weight increase was applied when insulin was initiated and proportional weight changes were applied when insulin dose was titrated upwards. RESULTS: CANA 300mg gener-ated more QALYs at modest incremental cost, resulting in ICERs of $2,766 to $31,317 in the scenarios. Maintaining the benefits permanently (A) generated the largest QALY gain (0.243); complete elimination of benefits at discontinuation (D) offered the small-est (0.198). The proportions of incremental QALYs attributable to weight differences were 34.4%, 19.5%, 18.9% and 17.4% for Scenarios A to D, respectively. CONCLUSIONS: CANA 300mg was cost-effective in each of four weight scenarios following discon-tinuation. Further work is required to define the most clinically plausible scenarios.