OBJECTIVES: To estimate the short-term cost-effectiveness of insulin detemir compared with Neurontin Proさせて頂 (NPH) insulin when initiating insulin treatment in patients with Type 2 Diabetes Mellitus (T2DM) in Spain. METHODS: A short-term (1 year) cost-effectiveness model was adapted to the Spanish public health care system. Based on a head-to-head randomized controlled trial (NCT01041627) that showed similar efficacy in glycemic control for both insulin types, weight gain (Δ=0.9kg) and the rate of non-severe hypoglycemia (between-arms RR=0.52; IC53% 0.40-0.69) were similar. The cost of treatment was calculated for both European countries (€21768-28348 QALY) and is based on the ICER threshold commonly accepted for Spain (€30,000 QALY). CONCLUSIONS: Insulin detemir is a cost-effective alternative to NPH insulin in the first and subsequent years of treatment of insulin-naive T2DM patients in Spain.

PDB64

COST-EFFECTIVENESS ANALYSIS OF INSULIN DETEMIR VERSUS INSULIN NEUROTYPIN HAGEDORN (NPH) IN PATIENTS WITH TYPE 1 DIABETES MELLITUS IN SPAIN

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OBJECTIVES: To estimate the short-term cost-effectiveness of insulin detemir compared with Neurontin ProDepending (NPH) insulin when initiating insulin treatment in patients with Type 1 Diabetes Mellitus (T1DM) in Spain. METHODS: A short-term (1 year) cost-effectiveness model was adapted to the Spanish public health care system. Based on the Update of CADTH Technology Report No. 92 (2008) that showed the incremental cost of treatment with insulin detemir versus NPH was €243.03. The incremental cost-effectiveness ratio (ICER) of insulin detemir versus NPH in insulin-naive T2DM patients was estimated to be €16,381.18 (QALY) in Spain. This value is lower than other published for other European countries (€21,768-28,348 QALY) and is below the ICER threshold commonly accepted for Spain (€30,000 QALY). CONCLUSIONS: Insulin detemir is a cost-effective alternative to NPH insulin in the first and subsequent years of treatment of insulin-naive T2DM patients in Spain.

PDB65

COST-EFFECTIVENESS ANALYSIS OF THE NEW-BORN SCREENING IN AUSTRIA

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OBJECTIVES: Since more than 45 years, a preventive program for the detection of congenital metabolic and endocrine diseases is carried out successfully in Austria. The goal is to investigate every new-born a few days after birth to initiate a quality assured therapy as quickly as possible. Since 1966, this program is carried out by the Ministry of Health at the University Clinic for Child and Adolescent Medicine, Medical University of Vienna. The aim of this study was to determine cost-effectiveness of the new-born screening. METHODS: We developed a decision-analytic model, which included specific Markov processes for the core disorders: Cystic Fibrosis (CF), phenylketonuria (PKU), medium-chain acyl-CoA (MCAD), congenital hypothyroidism (CH), galactosemia (GAL) and Maple syrup urine disease (MSUD). Costs and health benefits were predicted for neonates with new-born in Austria. We studied cost and quality effects over lifetime consequences. This encompassed direct costs (including screening costs and cost of illness), quality-adjusted-life-years (QALYs) and reduced expectation of life. Costs were presented per child and for the Austrian birth cohort. Costs from public sources were obtained from the Austrian Health Care Cost Reporting System (AKG) and from the IMS Drug Price Database. Costs and QALYs, life-years (LYs) and costs were projected over a lifetime horizon and discounted at 3% p.a. RESULTS: We found ten-times higher lifetime costs per child without screening compared to screening. The incremental costs of screening ranged from 12,308 (MCAD) to 291 (PKU). Screening saved 184 t and 0.09 QALYs per infant in comparison to no-screening strategy. Transferred to the entire birth cohort newborn screening is able to save resources by €14 million from the Austrian health care systems perspective each year. CONCLUSIONS: Funding the new-born screening saves money and is cost-effective for the Austrian health care system.

PDB66

THE IMPACT OF LONG-TERM CLINICAL EVIDENCE ON COST-EFFECTIVENESS OF EXENATIDE ONCE WEEKLY (BYDUREON®) VERSUS INSULIN GLARGINE FOR PATIENTS WITH TYPE 2 DIABETES MELLITUS (T2DM) FROM A UK NHS PERSPECTIVE

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OBJECTIVES: To update the cost-effectiveness of exenatide (Bydureon®), a selective sodium-glucose co-transporter-2 (SGLT-2) inhibitor, in combination with metformin versus insulin glargine once daily (T2DM) in Spanish patients. METHODS: We developed a decision-analytic model, which incorporates clinical inputs and the United Kingdom Prospective Diabetes Study (UKPDS) equations, the model predicts disease progression and the number of micro- and macro-vascular complications, along with diabetes-specific and all-cause mortality The perspective of the National Health Service in the UK was adopted over a lifetime horizon. Local unit costs and utility data were assigned to the appropriate model parameters to calculate total Quality-Adjusted-Life-Years (QALYs) and total costs. Deterministic and probabilistic sensitivity analyses (PSAs) were conducted. RESULTS: Local lifetime treatment with ExQW was well tolerated and associated with sustained glycemic control and sustained weight loss over at least 3 years. Compared to glargine, ExQW in combination with metformin was associated with an incremental benefit of 0.133 QALYs (95%CI: 0.057; 0.218) at an additional cost of £1,722 (95%CI: £1,396; £2,089), resulting in an incremental cost-effectiveness ratio of £13,267 per QALY gained. The PSA shows that at a willingness-to-pay threshold of £10,000 per QALY gained, ExQW treatment had an 83% probability to be cost-effective compared to the strategy including glargine. Sensitivity analyses showed that results were robust to variation in model parameters that can vary in consideration. CONCLUSIONS: Exenatide once weekly in combination with metformin is a cost-effective treatment option as first injectable therapy in patients inadequately controlled with metformin within established UK cost-effectiveness thresholds.
and results in higher QALYs in comparison with sitagliptin 100 mg in dual therapy as add-on to metformin and in triple therapy as add-on to MET plus SU. In dual therapy, as add-on to MET, canagliflozin (100 mg and 300 mg weighted average 65:35) has an average cost saving of 24 £ and an average QALY gain of 0.036. In triple therapy as add-on to MET+SU, canagliflozin (100 mg and 300 mg weighted average 65:35) has an average cost saving of 171 £ and an average QALY gain of 0.013, which leads to an ICER of 30,154 £/QALY. Sensitivity analyses suggest that canagliflozin is cost-effective also from a payer perspective and even when the time horizon, which is 30 years in the base case, is reduced to 10 years. CONCLUSIONS: Canagliflozin 100 mg and 300 mg will be a cost-effective alternative to sitagliptin in both dual and triple therapies, as add-on to MET or as add-on to MET+SU, respectively.

PDB69 HEALTH-ECONOMIC EVALUATION OF CANAGLIFLOZIN IN THE TREATMENT OF TYPE 2 DIABETES MELLITUS IN FRANCE

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OBJECTIVES: Canagliflozin is a sodium glucose co-transporter 2 (SGLT2) inhibitor developed for the treatment of adult patients with type 2 diabetes mellitus (T2DM). To evaluate the cost-effectiveness of canagliflozin in dual therapy as add-on to metformin (MET) compared to sitagliptin, and in triple therapy (add on to MET and sulphonylureas (SU)) compared to sitagliptin, liraglutide and a mixed strategy with both drugs. METHODS: The IMS CORE Diabetes Model was used to evaluate the cost-effectiveness of canagliflozin versus sitagliptin and liraglutide and a mixed strategy using French-specific data, where available. RESULTS: In dual therapy, as add-on to metformin versus sitagliptin, canagliflozin (100 mg and 300 mg weighted average: 50:50) dominates sitagliptin with average cost saving of 0.46 £ and average QALY gain of 0.013, which leads to an ICER of 30,154 £/QALY. In triple therapy canagliflozin (100 mg and 300 mg weighted average: 50:50) dominates sitagliptin with average cost saving of 229 £ and average QALY gain of 0.013. Sensitivity analyses show that canagliflozin is cost-effective also from a payer perspective and even when the time horizon, which is 30 years in the base case, is reduced to 10 years. CONCLUSIONS: Canagliflozin 100 mg and 300 mg will be a cost-effective alternative to sitagliptin in both dual and triple therapies, as add-on to MET or as add-on to MET+SU, respectively.