domized clinical trial (Nauck et al. 2011, 52 weeks) comparing DAPA+MET vs SU+MET was considered to determine the proportion of patients achieving 7 clinically relevant composite endpoints (CEP) including: changes in HbA1c, weight, hypoglycaemic events and systolic blood pressure (SBP). Additionally, it was calculated the cost per patient that achieved CEP. **RESULTS:** Patients treated with DAPA+MET showed a higher probability to achieve different CEP than SU+MET. In the case of CEP combining HbA1c<7%, no hypoglycemic events and ≥5% weight loss: 96% DAPA+MET and 4% SU+MET achieved it and were approximately 22 times more likely to achieve this CEP vs. SU+MET. In the case of CEP combining HbA1c<7%, no hypoglycaemic events and ≥3% weight loss: 92% patients treated with DAPA+MET and 8% with SU+MET achieved it and the probability was 11 times higher with DAPA+MET. And in CEP combining HbA1creduction ≥0.5%, weight loss ≥3% and SBP reduction ≥3 mmHg: 91% patients treated with DAPA+MET achieved it and 9% with SU+MET and the probability was 10 times higher. The cost per patients achieved different CEP was between €3,058 and €9,386 with DAPA+MET, whereas with SU+MET was between €5,125and €82,005, showing that sulfonylureas use could result in a achieved CEP cost per patient up to 8,7 times more expensive than treating patients with DAPA. **CONCLUSIONS:** The analysis showed that more patients treated with DAPA+MET in comparison with SU+MET achieved the CEP considered after one year of treatment, and it was also associated with a lower cost per patient.

PDB72

COST-MINIMIZATION ANALYSIS (CMA) OF CANAGLIFLOZIN COMPARED TO GLIMEPIRIDE AND SITAGLIPTIN AS DUAL THERAPY IN COMBINATION WITH METFORMIN

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OBJECTIVES: Canagliflozin, an agent that inhibits sodium glucose co-transporter 2, decreases glucose levels by lowering the renal threshold for glucose excretion, thereby increasing urinary glucose excretion (UGE). Increased UGE lowers glucose and reduces body weight and systolic blood pressure (SBP). In contrast, dipeptidyl peptidase-4 inhibitors such as sitagliptin lower glucose but are not associated with weight loss or SBP reduction, and sulfonylureas (glimepiride) are associated with weight gain and hypoglycaemia risk. The objective of this analysis was to assess the treatment costs of canagliflozin versus glimepiride or sitagliptin in patients with type 2 diabetes mellitus (T2DM) inadequately controlled with metformin from the Italian National Health Service perspective. **METHODS:** Two CMAs were conducted to compare the mean annual direct costs of a patient with T2DM receiving canagliflozin (100 or 300 mg) or glimepiride (5,6 mg) or sitagliptin (100 mg). Both analyses estimated 12-month annual patient costs. Treatment effects and adverse event rates were sourced from head-to-head studies (ie, direct comparisons) in dual therapy with background metformin in the canagliflozin Phase 3 program. In both analyses, only direct medical costs (eg, antihyperglycaemic and other drugs, hospitalizations after hypoglycaemic events, blood glucose monitoring) were considered. The analysis also included direct healthcare cost savings associated with weight reduction. Italian costs were sourced from the literature and local sources. Uncertainty was assessed by deterministic sensitivity analysis. **RESULTS:** Canagliflozin 100 and 300 mg showed lower expected costs (€2.785,46 and €2.979,52, respectively) versus glimepiride (€3.167,90). Canagliflozin 100 and 300 mg also showed lower expected costs (€2.820,05 and €3.013,96, respectively) versus sitagliptin (€3.030,38). **CONCLUSIONS:** This CMA showed that canagliflozin (100 or 300 mg) is a cost-saving strategy compared with glimepiride or sitagliptin in the treatment of patients with T2DM inadequately controlled with metformin from the perspective of the Italian National Health Service.

PDB73

HEALTH UTILITIES ASSOCIATED WITH HYPOGLYCEMIC EVENTS IN TYPE 2 DIABETES MELLITUS (T2DM) PATIENTS RECEIVING BASAL-BOLUS INSULIN THERAPY

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OBJECTIVES: Hypoglycemia is one of the major limiting factors in the management of T2DM patients on insulin. Disutility for different types of hypoglycemic events is an important component of cost-utility analysis. The aim of this study was to determine disutility for mild, severe and nocturnal hypoglycemic events in T2DM patients receiving insulin therapy. **METHODS:** One thousand T2DM patients on insulin (mean age – 61.1 yrs; male/female – 265/735) were included in the real-world study aimed to measure their quality of life and hypoglycemia burden. All the patients completed SF-36 questionnaire. To determine the utility value for each patient SF-6D questionnaire based on the SF-36 was used. In total, 631 patients recorded episodes of hypoglycemia during the last month. The patients without hypoglycemia and patients with mild, severe or nocturnal hypoglycemic events were analyzed. The average utility value for each group was calculated with adjustment for gender, age, comorbidities, late complications, glycosylated hemoglobin level. The disutility for one episode of each type of hypoglycemia was determined as the difference between the average utility for patients without hypoglycemia and average utility for patients with corresponding type of hypoglycemia. **RESULTS:** The utility value for patients without hypoglycemia was 0.680; for patients with mild hypoglycemia – 0.668; for patients with severe hypoglycemia – 0.595; for patients with nocturnal hypoglycemic event – 0.657. Patients without hypoglycemia had the highest utility value whereas patients with severe hypoglycemia the lowest one. Disutility value for mild hypoglycemic event was 0.012, severe event – 0.085, and nocturnal hypoglycemic event – 0.023. **CONCLUSIONS:** The values of health utility and disutility for T2DM patients receiving insulin therapy were obtained from the real-world data. Severe hypoglycemia was associated with greater disutility than non-severe and nocturnal hypoglycemia. The obtained values of health utility and disutility may be used in cost-utility analysis to estimate treatment outcomes for T2DM.

PDB74

COST-EFFECTIVENESS OF RAPID-ACTING ANALOG INSULIN FOR TYPE 1 DIABETES IN THE UK SETTING

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OBJECTIVES: Reimbursement agencies in Europe have questioned the benefits offered by rapid-acting analog insulin (RAAI) over regular human insulin (RHI) in type 1 diabetes (T1D). This analysis evaluates the cost-effectiveness of RAAI relative to RHI using a T1D-specific health economic model developed using recently published clinical data. **METHODS:** The PRIME Diabetes Model — a patient-level, discrete-event simulation — was used to evaluate health and cost outcomes in 100,000 people with T1D in the UK setting over a 50-year time horizon. The mean cohort characteristics (age 35.2 years, duration of diabetes 13.7 years, HbA1c 7.4%, body mass index 23.8 kg/m2, and 61.3% male) and insulin doses were derived from a clinical trial comparing RAAI with RHI, both with basal insulin glargine. In the base case, RHI changed HbA1c by –0.312%, and a meta-analysis indicated that the additional impact of RAAI was –0.09%. Compared with RHI, the relative rate of hypoglycemic events with RAAI was 1.07 (non-severe daytime), 0.51 (non-severe nocturnal), and 0.80 (severe). An annual discount rate of 3.5% was applied to health and cost outcomes. **RESULTS:** RAAI was associated with increased quality of life, providing an extra 0.68 quality-adjusted life years (QALYs) per patient compared with RHI (11.54 vs. 10.86). QALY gains were driven by reduced nocturnal and severe hypoglycemia. Reductions in hospitalizations related to severe hypoglycemia also contributed to a slight survival benefit with RAAI (19.4% vs. 18.7% at 50 years). Direct medical costs were higher with RAAI than with RHI, though the mean cost difference per patient was small: GBP 3,473. The incremental cost-effectiveness ratio was estimated at GBP 5,103 per QALY gained. Results were robust under probabilistic sensitivity analyses. **CONCLUSIONS:** In T1D, RAAI is associated with beneficial patient outcomes compared with RHI and is estimated to be cost-effective in the UK given generally accepted willingness-to-pay thresholds.

PDB75

ECONOMIC EVALUATION OF THE ONE-STEP SCHEME COMPARED WITH TWO-STEPS FOR SCREENING AND DIAGNOSIS OF GESTATIONAL DIABETES IN COLOMBIA

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OBJECTIVES: To evaluate the cost effectiveness and cost-utility the one-step scheme, recommended by the International Association of Diabetes and Pregnancy Study Group (IADPSG), compared with the two-step scheme, recommended by the American Diabetes Association (ADA) for screening and diagnosis of gestational diabetes mellitus in Colombia **METHODS:** We designed a decision tree model that compared the effectiveness, based on a systematic literature review, and expected costs for each alternative. Outcomes included correctly diagnosed cases, pre-term births and other obstetric complications. Utility weights, in QALYs, were derived from the literature. The analysis was conducted from a third-party payer perspective, considering only direct medical costs both for normal pregnancy and associated complications, based on base cases designed by an expert panel, and resource use turned into prices using official tariff manuals. Time frame was from gestational week 24 until one month after delivery. Results were subject to univariate and probabilistic sensitivity analyses. Costs were in 2014 Colombian pesos (1 euro = COP 2,660). **RESULTS:** By using the one-step scheme average costs per pregnant woman were similar for the one-step (€ 476), or the two-step (€ 500) schemes. In terms of adverse maternal and neonatal outcomes, the one-step scheme shows better clinical performance and slightly more QALYs gained (0.06). A correct diagnosis would be reached in 921 and 853 women per thousand, respectively. One-step scheme averted 8 pre-term births per thousand. The results withstood the sensitivity analyses. **CONCLUSIONS:** A one-step scheme should lead to slightly lower expected costs and better clinical outcomes.

PDB76

UNDERSTANDING THE INTER-RELATIONSHIP BETWEEN IMPROVED GLYCAEMIC CONTROL, HYPOGLYCAEMIA AND WEIGHT CHANGE WITHIN A TYPE 1 DIABETIC POPULATION

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OBJECTIVES: Guidelines for the management of type 1 diabetes advocate treatment regimens that reduce the frequency of hypoglycaemic episodes, while maintaining blood glucose levels as near normal as is feasible. Therapy-related consequences of treatment, such as weight gain and hypoglycaemia act as a barrier to optimal glycaemic control and impact the cost-effectiveness of therapies. This study sought to ascertain the respective contribution of changes in hypoglycaemia, weight and glycosylated haemoglobin (HbA1c) to quality-adjusted survival among a type 1 diabetic population. **METHODS:** The Cardiff Type 1 Diabetes Model was utilised to model an EDIC-type population: age 33.3 years, 47% female, with baseline BMI 25.8 kg/m2, HbA1c 8.2% and duration of diabetes 12.1 years. Baseline hypoglycaemia rates and utility decrements associated with macro- and microvascular complications, hypoglycaemia and weight change were sourced from the published literature. Treatment related changes in symptomatic hypoglycaemia (±10%, 20% or 30%) and weight (±1kg, 2kg or 3kg) were applied over the first 6 months of treatment and quality-adjusted life years (QALYs) evalu-