patients' lifetimes. Duration of treatment was assumed to be 5 years, before switching to a basal insulin regimen. Changes were made to the base-case assumptions. First, the utility change per BMI unit gained (in patients with a BMI > 25 kg/m^2) was decreased from −0.01 to −0.0061. Second, the treatment duration was increased from 5 to 10 years. All other variables were kept constant. **RESULTS:** In the comparison with rosiglitazone, liraglutide was associated with a base-case incremental cost-effectiveness ratio (ICER) of £6226 per QALY gained, which increased to £7545 with BMI utility changes and to £16,477 when the treatment duration was increased. Similar increases were seen for comparisons with glimepiride (£13,257 (base case) to £25,343 (BMI utility change) and £38,368 (10-year treatment)) and sitagliptin (£9,851 [base case] to £14,616 [BMI changes] and £17,089 [10-year treatment]). **CONCLUSIONS:** Increasing the treatment duration and decreasing the impact of BMI on quality of life increased the ICER of liraglutide versus comparators. Liraglutide was shown to be cost-effective in dual therapy (assuming a threshold of £20,000 per QALY gained) versus rosiglitazone and sitagliptin in all three scenarios (base case, BMI utility changes, and 10-year treatment).

PDB40

THE ECONOMIC IMPORTANCE OF "METABOLIC MEMORY" IN THE TREATMENT OF TYPE 2 DIABETES MELLITUS (T2DM) IN SWEDEN

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OBJECTIVES: Analysis of the post-interventional follow-up of the UKPDS found that the benefits of intensive therapy persisted even 10 years after the trial, a finding consistent with "metabolic memory" (i.e., early metabolic status influences long-term outcomes). We assessed the potential impact of "metabolic memory" on the cost-effectiveness of intensive versus conventional care in Sweden. **METHODS:** We used the Economic and Health Outcomes (ECHO)-T2DM model to simulate lifetime health outcomes (including QALYs) and medical costs for 500 cohorts of 2000 newly diagnosed patients. In each cohort, patients were randomized to intensive or conventional care and HbA1c treatment effects corresponding to the UKPDS study were applied for the first 10 years. Consistent with findings from the follow-up study, HbA1c values were assumed to converge by year 10. Subsequently, in the intensive care arm, "metabolic memory" effects (reduced risk for certain microvascular and macrovascular events and mortality) were applied. Two sets of "metabolic memory" effects from the UKPDS follow-up study were used: those observed in the sulfonylurea/insulin subsample and those observed in the metformin subsample. a scenario assuming no "metabolic memory" effects was simulated for comparison. Unit costs were derived from the Swedish literature (modeling studies and a regression analysis of inpatient care costs based on administrative hospital data linked to the Swedish National Diabetes Register). **RESULTS:** Including "metabolic memory" had a large effect on the cost-effectiveness estimates. The incremental cost-effectiveness ratio declined from SEK2,387,292 (~€250,000) without "metabolic memory" to SEK731,308 (~€75,000) assuming effects from the sulfonylurea/insulin sample and to SEK445,425 (~€45,000) assuming effects from the metformin sample. **CONCLUSIONS:** These results suggest that good glycemic control early in the disease continuum may confer significant medical cost savings over the long term. Evaluations of the cost-effectiveness of intensive glycemic control in newly diagnosed patients should potentially consider the health and cost consequences of "metabolic memory."

PDB41

COST-EFFECTIVENESS OF LIRAGLUTIDE IN PEOPLE WITH TYPE 2 DIABETES IN THE SLOVAK REPUBLIC

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OBJECTIVES: This study aimed to assess cost-effectiveness of treatment with liraglutide added to a standard therapy with metformin (MET) or/and sulphonylurea (SU) compared with rosiglitazone and exenatide. **METHODS:** Our study used a health economic model (the CORE Diabetes Model) to project the long-term costs and clinical outcomes of liraglutide based on clinical data from LEAD-1 trial: liraglutide + SU versus rosiglitazone + SU; and LEAD-6 trial: liraglutide + MET+/–SU versus exenatide + MET+/–SU. The analysis was performed from the Slovak health-care services payer's perspective in a 20-year time horizon. The analysis used health-state utility values from published sources to assess the effect of treatment on QALYs. The unit costs of treatment and complications were derived from published sources and official tariff lists for health-care services paid by public payer. All figures are shown in EUR. **RESULTS:** QALYs increased with liraglutide 1.2 mg + SU versus SU + rosiglitazone 4 mg by 0.203. Total costs increased by €2561 resulting in incremental costs per QALY of €12,615. The incremental cost-effectiveness ratio for liraglutide 1.8 mg + MET+/–SU versus exenatide 10 µg + MET+/–SU was estimated at €24,013 per QALY gained (QALYs increased by 0.112). **CONCLUSIONS:** Using the CORE Diabetes Model and data from the LEAD 1 and LEAD 6 trials treatment with liraglutide is a cost-effective intervention compared with both rosiglitazone and exenatide. Sensitivity analysis showed the results are only moderately changing when altering the key parameters and assumptions.

PDB42

INCRETIN-THERAPY IN ADDITION TO METFORMIN AND/OR SULFONYLUREA FOR TYPE 2 DIABETES MELLITUS (T2DM): COST-EFFECTIVENESS OF LIRAGLUTIDE VERSUS EXENATIDE FROM THE PERSPECTIVE OF THE GERMAN STATUTORY HEALTH INSURANCE (SHI)

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BACKGROUND: Unlike most other antihyperglycemic drugs, glucagon-like peptide 1 (GLP-1) receptor agonists have a glucose-dependent action and promote weight loss. In a randomized clinical trial (RCT) over 26 weeks reported by Buse et al. (2009), the novel GLP-1 agonist liraglutide (1.8 mg once daily, OD) was found to be significantly more effective than exenatide (10 µg twice daily) in terms of HBA1c reduction. **OBJECTIVES:** To compare, from a German payer's (SHI) perspective, the long-term clinical and cost-effectiveness of liraglutide (1.8 mg OD) versus exenatide (10 µg BID) in T2D patients, based on data from the randomized clinical trial (RCT) by Buse et al. 2009. **METHODS:** The CORE Diabetes Model (CDM) was applied using RCT data. The model was calibrated to RCT baseline characteristics and background mortality in a German diabetes population, applying epidemiological data from long-term studies including UKPDS and Framingham to project morbidity and mortality of T2DM. Unit costs for direct costs were applied from an SHI perspective for year 2009. a discounting rate of 3% was used for costs and clinical effects. For hypothetical cohorts of 1000 patients, each followed for 20 years, patients were assumed to be maintained on liraglutide and exenatide, respectively, for 5 years and subsequently switched to insulin. Costs and effects were projected over a 20-year time horizon. **RESULTS:** Estimated 20-year survival rates were higher for liraglutide 1.8 mg once daily (36.8%) compared to exenatide 10 µg administered twice daily (35.6%), and cumulative costs were €46,308 (liraglutide) and €45,025 (exenatide), respectively. Base-case ICERs were €16,632 per life-year gained for liraglutide versus exenatide, and €11,606 for liraglutide versus exenatide per QALY gained. Sensitivity analyses indicated robustness of findings. **CONCLUSIONS:** Long-term projections combining RCT data with the CDM strongly suggest an acceptable to attractive cost-effectiveness of liraglutide compared to exenatide according to currently prevailing standards.

PDB43

LONG-TERM COST-EFFECTIVENESS OF LIRAGLUTIDE VS. SULPHONYLUREA IN POLAND

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OBJECTIVES: To assess the long-term cost-effectiveness of treatment with liraglutide on top of standard therapy with metformin (MET) compared with sulphonylurea (SU) in people with type 2 diabetes. **METHODS:** The extensively published and validated CORE Diabetes Model was populated with the clinical data from LEAD 2: liraglutide + MET versus SU + MET. The analysis was performed from the polish health-care services payer's perspective. a 20-year time horizon was chosen to reflect the costs and outcomes of diabetes as these are often only seen in the later stages of the disease. The analysis used health-state utility values from published sources to assess the effect of treatment on QALYs. The unit costs of treatment and complications were derived from published sources or based on expert opinion survey and Polish official tariff lists for health-care services paid by public payer. All figures are shown in EURO (1 EURO = 3.9 PLN). **RESULTS:** QALYs increased with liraglutide 1.2 mg + MET versus SU + MET by 0.191. Total costs increased by €3,349 resulting in incremental costs per QALY of €17,565. The incremental cost-effectiveness ratio for liraglutide 1.8 mg + MET versus SU + MET was estimated at €24,842 per QALY gained (QALYs increased by 0.207). Sensitivity analysis showed the results to be moderately changing when altering the key parameters and assumptions (for liraglutide 1.2 mg range from 12,944 to €30,275/QALY). **CONCLUSIONS:** Treatment with liraglutide is a cost-effective intervention compared with sulphonylurea and is likely to represent good value for money in Polish setting.

PDB44

THE COST-EFFECTIVENESS OF SAXAGLIPTIN VERSUS SULFONYLUREA (SU) IN THE TREATMENT OF TYPE 2 DIABETES MELLITUS (T2DM) IN GERMANY

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OBJECTIVES: This study evaluates the long-term economic consequences of saxagliptin versus sulfonylurea (SU, glipizide) as second-line therapy when used in combination with metformin (MET) after failure of monotherapy treatment with MET, in patients with type 2 diabetes mellitus (T2DM) in Germany. **METHODS:** A published discrete event simulation model with a fixed time increment was used and set to a 40-year (life-) time horizon. Disease progression was modeled using evidence from the UK Prospective Diabetes Study (UKPDS 68). The treatment sequence matched that of published guidelines, and efficacy and safety data were derived from published sources. The model assumes that quality-adjusted life-years (QALYs) are affected by complications and hypoglycaemic events over a lifetime. As such costs and utility decrements for macro- and micro-vascular complications, and adverse events such as severe hypoglycaemia are included. Costs were specific to the German setting where SUs are generic. Costs and effects were discounted annually at 3%. The perspective of the national sick funds was taken, and recommendations from the Institute for Quality and Efficiency in Health Care (IQWiG) were considered. **RESULTS:** Treatment with saxagliptin + MET was