associated with lower incidence of both symptomatic and severe hypoglycaemic events, resulting in an incremental benefit of 0.12 QALYs and an incremental cost-effectiveness ratio (ICER) of €13,931 per QALY gained. Modest reductions in all macro-vascular and micro-vascular complications were seen in those receiving saxagliptin + MET compared with SU + MET. Sensitivity analysis showed that treatment-related weight changes, as a risk factor for complications, represent the most influential driver of cost-effectiveness. CONCLUSIONS: Saxagliptin is associated with improved outcomes, a lower incidence of hypoglycaemic events, and weight neutrality, when compared with generic SU, at a cost that would likely be considered acceptable in the German setting.

COST-EFFECTIVENESS ANALYSIS OF SAXAGLIPTIN IN THE TREATMENT OF DIABETES MELLITUS TYPE 2 IN SPAIN

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OBJECTIVES: Saxagliptin is indicated as an add-on combination therapy for adult patients with diabetes mellitus type 2 (T2D) to improve glycaemic control in combination with metformin, a sulphonylurea (SU) or a thiazolidinedione (TZD). The objective of this study was to evaluate the cost-effectiveness in Spain of saxagliptin when added to metformin in comparison with SU plus metformin or TZD plus metformin.

METHODS: The analysis uses the Cardiff Long Term Model which simulates treatment pathways based on published clinical trials of TZD and SU. Saxagliptin was demonstrated in a 18-week non-inferiority study (CV181,036). Available direct comparators with saxagliptin and SU and TZD are used to assign efficacy and safety parameters. Spanish costs are used as for macro and micro-vascular complications as well as adverse events such as severe hypoglycaemia. Utility decrements for ischemic heart disease, myocardial infarction, congestive heart failure, stroke, blindness, end-stage renal disease, transplant, amputation and body mass index are also accounted in the model. Health outcomes are measured in terms of QALYs, assuming that the lifetime QALY is affected by complications, occurrence of hypoglycaemic episodes and weight changes. The perspective used is that of the Spanish Health System.

RESULTS: Saxagliptin as add on to metformin is cost-effective compared with SU and TZD (ICER < €10,000). Extensive univariate sensitivity analysis shows that the most influential factor is the weight variation, which increases with treatment with SU and TZD whereas DPP-4 inhibitors have shown to be weight neutral.

CONCLUSIONS: The cost-effectiveness analysis shows that saxagliptin is cost-effective compared with both SU and TZD in combination with metformin for the treatment of T2DM in Spain.

COST-EFFECTIVENESS OF NEW ANTIDIABETICS IN TYPE 2 DIABETES: A REVIEW

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OBJECTIVES: Although having substantial costs, the new antidiabetics for Type 2 diabetes treatment present more alternatives for glycemic control of the disease. To evaluate their cost-effectiveness, the New Antidiabetics for Type 2 diabetes indexed on PubMed, EMBASE databases and American Diabetes Association abstracts were evaluated. METHODS: The cost-effectiveness of Type 2 diabetes based on the new antidiabetics was analyzed through literature review. Searches were carried out on PubMed, EMBASE and ADA abstracts to identify the articles published from 2008 to 2010, keying in the terms “cost-effectiveness” and “type 2 diabetes” with language filtering. “English.” The language filter for “Turkish” was also used but no result was achieved. Upon this filtration, the abstracts were reviewed to determine whether they included antidiabetics. RESULTS: Ten full texts, seven abstracts and three peer reviews were identified. In all studies, the cost-effectiveness of antidiabetics was assessed using the validated CORE Diabetes Model, except for two based on the Discrete Event Simulation Model. The outcomes from IMPROVE, PRoAct, PRESENT, UKPDS and PREDICTIVE trials were used. In these studies, biphasic insulin aspart, exenatide, pioglitazone, insulin detemir, insulin glargine and sitagliptin were all studied under different settings and against various comparators. Biphasic insulin aspart versus human insulin was mostly found to be cost-effective in certain studies. Exenatide versus insulin glargine was established to be likely cost-effective in two studies. Pioglitazone was found to be dominant compared to rosiglitazone. Insulin detemir was established to be cost-saving in comparison with OAD or NPH insulin, or insulin glargine. Sitagliptin was regarded as either cost-effective or cost-saving compared to rosiglitazone. Insulin detemir was established to be cost-saving in comparison with OAD or diet in treatment of T2DM. EFFICACY and SAFETY data are based on an indirect comparison of saxagliptin and SU and TZD based on the similarity in safety and efficacy between saxagliptin and sitagliptin demonstrated in a 18-week non-inferiority study (CV181,036). Available direct comparators with saxagliptin and SU and TZD are used to assign efficacy and safety parameters. Spanish costs are used as for macro and micro-vascular complications as well as adverse events such as severe hypoglycaemia. Utility decrements for ischemic heart disease, myocardial infarction, congestive heart failure, stroke, blindness, end-stage renal disease, transplant, amputation and body mass index are also accounted in the model. Health outcomes are measured in terms of QALYs, assuming that the lifetime QALY is affected by complications, occurrence of hypoglycaemic episodes and weight changes. The perspective used is that of the Spanish Health System. RESULTS: Saxagliptin as add on to metformin is cost-effective compared with SU and TZD (ICER < €10,000). Extensive univariate sensitivity analysis shows that the most influential factor is the weight variation, which increases with treatment with SU and TZD whereas DPP-4 inhibitors have shown to be weight neutral.

CONCLUSIONS: The cost-effectiveness analysis shows that saxagliptin is cost-effective compared with both SU and TZD in combination with metformin for the treatment of T2DM in Spain.