

from major epidemiological studies. Costs of complications were derived from published sources. From the government payer perspective, direct costs of diabetes complications and of SMBG were projected over patient lifetimes. Outcomes were discounted at 3% annually. **RESULTS:** Depending on type of treatment (diet/exercise, oral medications, or insulin), greater glycemic control with SMBG improved (discounted) QALE by 0.10 to 0.15 QALYs and increased total costs by €323 to €703 per patient. The resulting incremental cost-effectiveness ratios ranged from €3220 to €7276 per QALY gained, and were well within current willingness-to-pay limits. SMBG was most cost-effective in the sub-group of patients being treated with oral antidiabetic medication. **CONCLUSIONS:** Within the three treatment regimens examined, the addition of SMBG was associated with increased glycemic control and with improved clinical and economic long-term outcomes. The incremental cost-effectiveness ratios were of magnitudes typically considered to indicate good value for money within the French health care setting. Additional comparative studies are needed to further assess Utilities and other standard outcomes associated with SMBG in patients with type 2 diabetes.

PDB17

SELF MONITORING OF BLOOD GLUCOSE IN PATIENTS WITH TYPE 2 DIABETES: COST UTILITY ANALYSIS IN A GERMAN GOVERNMENT PAYER SETTING

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OBJECTIVES: Previous studies have shown that for patients with type 2 diabetes, self monitoring of blood glucose (SMBG) can improve glycemic control (with HbA1c improvements of 0.3–0.6%, depending on treatment received). This in turn, can reduce risks of disease complications. Because monitoring supplies can have high acquisition costs, country-specific evaluations of SMBG cost-effectiveness are needed. The aim of this analysis was to estimate, within Germany, the cost-effectiveness of using SMBG. **METHODS:** A validated, published model for type 2 diabetes (The CORE Diabetes Model) was used to project improvements in quality-adjusted life expectancy (QALE), long-term costs and cost-effectiveness of SMBG. A series of Markov models simulated the progression of diabetes-related complications (cardiovascular, neuropathy, renal and eye disease). Transition probabilities and HbA1c-dependent adjustments came from major epidemiological studies. Costs of complications were derived from published sources. From the Government payer perspective, direct costs of diabetes complications and of SMBG were projected over patient lifetimes. Outcomes were discounted at 3% annually. **RESULTS:** Depending on type of treatment (diet/exercise, oral medications, or insulin), greater glycemic control with SMBG improved (discounted) QALE by 0.05 to 0.12 QALYs and increased total costs by €340 to €1227 per patient. The resulting incremental cost-effectiveness ratios ranged from €7558 to €10,447 per QALY gained, and were well within current willingness-to-pay limits. SMBG was most cost-effective in the sub-group of patients being treated through diet and exercise. **CONCLUSIONS:** Within the three treatment regimens examined, the addition of SMBG was associated with increased glycemic control and with improved clinical and economic long-term outcomes. The incremental cost-effectiveness ratios were of magnitudes typically considered to indicate good value for money within the German health service setting. Additional comparative studies are needed to further assess Utilities and other standard outcomes associated with SMBG in patients with type 2 diabetes.

PDB18

COST-EFFECTIVENESS OF ACARBOSE IN PATIENTS WITH TYPE-2 DIABETES IN THREE COUNTRIES

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OBJECTIVES: To project the long-term clinical and cost outcomes of the addition of acarbose to existing treatments for type 2 diabetes patients in German, Spanish and Taiwanese settings. **METHODS:** Patient characteristics and acarbose treatment effects were based on clinical data from the MERIA meta-analysis. A published computer simulation model of diabetes was used to project long-term clinical and cost outcomes in patients receiving acarbose or placebo in addition to their existing treatment. It was used to project the life expectancy (LE), quality-adjusted life expectancy (QALE), cumulative incidence of diabetic complications and medical costs over the lifetime of the patients. Costs were calculated from a third-party health care payer perspective with unit costs derived from published sources (2004 Euro values). Costs and clinical benefits were discounted at 5% (Germany) and 3% (Spain, Taiwan) annually. **RESULTS:** Long-term projections indicated acarbose was associated with notable improvements in LE and QALE compared to placebo. For Germany, Spain and Taiwan incremental quality-adjusted life expectancy for acarbose compared to placebo were 0.21, 0.23 and 0.27 QALYs, respectively. Incremental cost (direct medical costs over patients' lifetimes) values of €134, €468 and €331 were estimated for the same three country settings. These values produced incremental cost-effectiveness ratios (ICERs) of €692 (Germany), €2199 (Spain), and €1291 (Taiwan) per QALY gained for acarbose versus placebo. The additional pharmacy costs associated with acarbose treatment were largely offset by reduced complication costs over patients' lifetimes. Acceptability curve analysis showed that with a willingness-to-pay of €20,000 per QALY gained, the probability of being cost-effective was 95% in Germany, 93.5% in Spain and 96% in Taiwan for acarbose versus placebo. **CONCLUSIONS:** Acarbose was associated with reduced incidence of diabetes-related complications and improvements in LE and QALE and provides excellent value for money versus placebo over patients' lifetimes in the German, Spanish and Taiwanese settings.

PDB19

COMPARATIVE OUTCOMES-BASED HEALTH ECONOMIC EVALUATION OF TYPE 2 DIABETES PATIENTS ON BASAL INSULIN ANALOGS

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OBJECTIVES: Type 2 diabetes poses significant clinical and economic burden to health care systems. It is therefore important to project economic and quality-adjusted effects of real-life clinical outcome improvements with different treatment options. This study aimed to evaluate such impacts when transferring type 2 patients on insulin glargine to insulin detemir. **METHODS:** Baseline and 3-month treatment effect data were collected from a subgroup of 260 patients with type 2 diabetes replacing insulin glargine with insulin detemir from a prospective, internationally-based observational trial. Baseline demographic data were: male 46.9%; mean age 63.7 years; duration of diabetes 9.9 years; HbA1C 7.83%; BMI 30.2 kg/m². A validated simulation model of diabetes calculated gains in life years (LYG), quality-adjusted