lowing three criteria: 1) diagnosis of diabetes mellitus; 2) prescription of oral anti-diabetic drug; and 3) fasting blood or plasma glucose value indicative of diabetes. The average length of follow-up upon inclusion was 4.5 years. METHODS: Costs of inpatient care were estimated by classifying hospitalisations of study patients into diagnosis-related groups (DRGs) according to the Nord-DRG classification system and assigning average costs per DRG (2002 prices) according to a national list relying on individual patient level costs incurred at Swedish hospitals applying the Nord-DRG system. Costs of outpatient care were estimated by assigning unit costs of outpatient care-giver contacts obtained from published sources to data on study patients’ care-giver contacts as recorded in medical records at participating primary care centres. RESULTS: The average annual cost of inpatient care over the studied years was €1088 per patient (SD €4460; n = 9292 on average). Between 2000 and 2004, an annual increase in costs of between 9% and 15% was observed (constant prices). The average annual cost of outpatient care during the studied years was €363 per patient (SD €37; with little variation over the years. GP visits accounted for 40% of outpatient costs, the average patient making 1.7 GP visits per year. CONCLUSIONS: Diabetes continues to impose a heavy economic burden on society. Cost estimates from this population-based sample of Swedish diabetic patients may serve as reference values for a Swedish setting.

PDB26
COST-EFFECTIVENESS OF ROSIGLITAZONE FOR TREATMENT OF TYPE 2 DIABETES IN PORTUGAL USING DIFFERENT METHODS TO MODEL CLINICAL EFFECTS
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OBJECTIVES: The RESULT study demonstrated that sulphonylurea (SU) plus rosiglitazone (RSG) provided a sustained and substantial increase in beta-cell function (BCF) from baseline (56%, p < 0.0001) compared to SU alone (6%, p = 0.41). This modelling study explores the impact on disease progression, health outcomes and health care expenditure in Portugal of different approaches to modelling RSG’s effect on BCF. METHODS: DiDACT, a peer-reviewed published long-term model of T2DM, was used to replicate patient characteristics (73% Male, mean age 68.2 years, mean BMI 30 kg/m2) and the impact of SU + RSG on BCF observed in the RESULT study using an additive, a multiplicative or combined approach. Disease progression for 1000 hypothetical patients, projected total lifetime health care costs and health gains, measured in time to insulin and quality-adjusted life years (QALYs) were predicted. Following failure of intermediate SU dose to maintain glycaemic target, up-titrated SU therapy was compared to SU + RSG combination. The treatment change threshold was HbA1C ≥ 7.5%. Resources were valued using national unit costs from a variety of sources. Costs and outcomes were discounted at 5% per year. RESULTS: Both revised calibrations yielded lower lifetime health care costs and additional QALYs, compared to the original calibration. Compared with SU alone both revised calibrations resulted in lower incremental cost-effectiveness ratios (ICERs). Each representation of RSG showed greater time to insulin than SU alone (13 years); the additive approach substantially extended viability of oral therapy to 27.5 years compared to 20 years for multiplicative and original calibrations. CONCLUSIONS: Each modelling approach resulted in reduced costs, increased QALYs and time to insulin when compared with the original calibration.

PDB27
A COST-UTILITY ANALYSIS OF ORLISTAT (XENICAL®) IN THE TREATMENT OF DIABETIC PATIENTS WITH MORBID OBESITY AND ADDITIONAL CVD RISK IN NORWAY
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OBJECTIVES: The co-epidemics of obesity and type II diabetes and associated complications result in an increasing population with high risk of serious morbidity, mortality and reduced quality of life. This analysis has been specifically developed to estimate the cost per quality adjusted life year (QALY) gained with orlistat compared to standard clinical practice (SCP) in a particularly high-risk diabetic population with morbid obesity (BMI ≥ 35 kg/m2 and at least one additional CVD risk). In Norway this is a population with clearly unmet needs for preventive medical interventions. METHODS: The incremental cost-utility is calculated in an Excel-model comparing 1 year of orlistat treatment followed by 9 years of SCP with 10 years of SCP. The baseline risk is based on the findings of the UK Preventive Diabetes Study (UKPDS), adjusted for differences in BMI. The effects of orlistat and SCP (conservatively assumed equal to placebo + SCP) on risk factors (BMI, HbA1c, LDL-cholesterol, SBP), are based on results from the relevant randomized clinical trials. 3 years catch-up of risks after termination of orlistat is assumed. UKPDS and the Heart Protection Study provide assessments of the change in risk associated with change in HbA1c and the other relevant risk factors. Effects on utility are based on the results from CODE-2. Direct costs related to the treatment alternatives and their associated complications are included from a Norwegian societal perspective. RESULTS: The expected incremental cost of treating high-risk Norwegian diabetic morbid obese patients with orlistat is approximately €312.5/QALY. Extensive one- and multiway sensitivity analyses using Monte Carlo simulation indicate robustness of the results. CONCLUSIONS: The results of this model indicate that one year treatment with orlistat is a highly cost-effective alternative to SCP for diabetic patients with morbid obesity and additional CVD risk in Norway.

PDB28
INADEQUATE GLYCEMIC CONTROL: IS IT RELATED WITH MORE COMORBIDITIES AND MORE RESOURCE UTILIZATION?
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OBJECTIVE: To evaluate the influence of inadequate glycemic control (IC) in comorbidity and health resource utilization of type 2 diabetic patients treated in a general practitioner setting. METHODS: Retrospective observational study (systematic-sampling) of patients older than 18 years, treated in 5 primary care centres during 2005. The following parameters were evaluated: IC, defined by HbA1c > 7%; age; sex; comorbidities (hypertension, hypercholesterolemia, smoking, obesity, ischemic-heart-disease, cardiovascular event (CVE), COPD, depression, cardiac-renal-hepatic insufficiency, microvascular complications); clinical parameters (BMI, total-cholesterol, LDL-Friede-
Abstracts

Comparing the Development of a German Diabetes Population with Respect to Longterm Outcomes Using Data from the Detect Study and the Eagle Diabetes Simulation Model

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OBJECTIVES: Based on the type 2 diabetes cohort of the DETECT study (Curr Med Res and Opinion; 2005; 21/4: 619–29) simulations with the EAGLE Diabetes Model (Diab Technology & Therapeutics; 2006; 8/2: 219–36) were conducted. Development of long-term complications was compared with respect to different treatment targets for HbA1c. Additionally, the outcome for a mixed patient population typically for a general practice was assessed. METHODS: The Economic Assessment of Glycemic Control and Longterm Effects (EAGLE) model simulates long-term effects of diabetes treatment and related costs. Baseline characteristics of the simulation cohorts corresponded to type 2 patients of the DETECT study with HbA1c > 9%: age 63 ± 11 years, diabetes duration 9 ± 7 years, 49% male, hypertension prevalence 71%, mean HbA1c 10.1 ± 1.3%. Three cohorts with different HbA1c targets were defined: a) no change; b) 8%; and c) 6.4%. A fourth cohort was composed of 23% patients with target a) 60% target; b) and 15%; and target c). All cohorts achieve respective targets within one year followed by a yearly increase of 0.2%. Simulations were run with 1000 patients over 10 years. RESULTS: The relative risk reduction comparing cohort b versus no change was 19% (MI); 17% (stroke); 12% (PAD); 7% (prolif. retinopathy); and 4% (ESRD). A treatment target according to the German diabetes guideline (c versus a) resulted in reductions of 30%, 27%, 20%, 11%, and 6%, respectively. Analysing the mixed cohort demonstrated that treatment effects were similar to the results of cohort b. CONCLUSIONS: The simulations based on a German diabetes population demonstrate the long-term effects of various treatment targets for HbA1c. Although a steady re-increase of HbA1c values was assumed a significant reduction in micro- and macrovascular events can be achieved. Simulations of a mixed cohort correlate to real world patient groups and could be used for cost estimations in practice settings.

PDB30

Drugs Use in Diabetic Patients

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OBJECTIVE: to assess the economic and epidemiologic impact of diabetes in Campania a region of approximately 5.7 million inhabitants in the south of Italy. METHODS: we collected, from an electronic database, all prescriptions for antidiabetic drugs reimbursed in the first half year of 2005 in 8 local health authorities (60% of the overall population) of Campania. The diabetic cohort was defined as the population of subjects receiving at least one prescription of an antidiabetic agent, classified according to their therapeutic role using Anatomic Therapeutic Chemical (ATC) classification. We identified 3 groups: who received only insulin (A) or only oral blood glucose lowering drugs (B) or both (C). Drugs cost and drugs consumption were quantified using NHS prospective (expressed in Euro 2005) and Defined Daily Dose system (DDD) respectively. RESULTS: The diabetic cohort included 200,070 subjects (5.7% of the observed population): 15.3% group A (mean age 62.7 ± 17.9 y.o., 0.78 MF), 78.5% group B (mean age 65.7 ± 12.2 y.o., 0.85 MF) and 6.2% group C (mean age 66.5 ± 11.1 y.o., 0.57 MF). The mean drug/cost/patient was: 524.6€ group A (36.6% insulin, 27.1% cardiovascular drugs), 6290.4€ group B (11.1% oral hypoglycemic drugs, 47.1% cardiovascular drugs) and 6649.8€ group C (25.7% insulin, 5.4% oral hypoglycemic drugs, 34.6% cardiovascular drugs). Total cost for diabetic patients represents 17.8% of the total expenditures. CONCLUSION: Chronic-degenerative pathologies, such as diabetes, implies a relevant social and economic impact. Expenses that are associated to the treatment and the prevention of complications, in particular cardiovascular problems, are registered among the main items listed in the health care budget. Among diabetics patients the high use of drugs for cardiovascular problems is the cost driver.

PDB31

Reimbursement of Pharmaceuticals and Brand-Generic Drug Utilization: Evidence from Oral Hypoglycemic Agents for Ambulatory Care in Taiwan

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OBJECTIVE: This study is to investigate the impact of the National Health Insurance (NHI) reimbursement price on the utilization of brand name oral hypoglycemic agents (OHAs) and its generic counterparts for ambulatory care under an institutional context characterized by a health care system being lack of separating drug prescribing and dispensing as well as a hospital system with a large outpatient department, likely resulting in the monopsony power of hospitals over the wholesale market of pharmaceuticals. METHODS: Data is from the National Health Insurance Database 1997–2004 with 29,253 diabetic patient cohort data in 7 years. Patients’ severity is measured by the types of combination pharmacological therapy. The two-part model was used to estimate the effect of reimbursement price on