complications treatment costs were the main cost driver, accounting for 67% and 77% of total direct costs of the insulin detemir therapy and NPH insulin therapy respectively. Due to a better reduction from baseline of HbA1c, the development and progression of complications was delayed, and the cumulative incidence of diabetes complications decreased for insulin detemir plus OADs therapy versus NPH insulin plus OADs therapy. CONCLUSIONS: The results of this study demonstrate that insulin detemir is a very cost-effective option for the treatment of type 2 diabetes compared to NPH insulin in Portugal.

PDB46

COST-EFFECTIVENESS OF ANGIOTENSIN CONVERTING ENZYME INHIBITORS FOR THE PREVENTION OF DIABETIC NEPHROPATHY IN THE NETHERLANDS - A MARKOV MODEL

Adalbert C. Coelho, Fons S. Akkerman, M. Gendjour A.2
1Maastricht University, Maastricht, The Netherlands, 2RWTH University Aachen, Aachen, Germany, 3Pennsylvania Biomedical Research Center/Louisiana State University, Baton Rouge, LA, USA

OBJECTIVES: Type 2 diabetes is the main cause of end-stage renal disease (ESRD) in Europe and the USA. Angiotensin-convertin g enzyme (ACE) inhibitors slow down the progression of renal disease and therefore provide a renal-protective effect. The aim of our study was to assess the most cost-effective time to start an ACE inhibitor (or an angiotensin II receptor blocker (ARB) if coughing as a side effect occurs) in patients with newly diagnosed type 2 diabetes in the The Netherlands.

METHODS: Three strategies were compared: treating all patients at the time of diagnosis type 2 diabetes, screening for microalbuminuria, and testing for macroalbuminuria. A lifetime Markov decision model with simulated 50-year-old patients with newly diagnosed diabetes mellitus was developed using published data on costs and health outcomes and simulating the progression of renal disease. A health insurance perspective was adopted. RESULTS: In the base-case analysis, the three ACE strategies were associated with the highest life-years and highest QALYs, and therefore dominates screening both for microalbuminuria and macroalbuminuria. A multivariate sensitivity analysis shows that the probability of savings is 70%. Treating all patients with an ARB would also be a dominant strategy despite the fact that ARBs are a much more expensive alternative. CONCLUSIONS: Patients with type 2 diabetes should receive an ACE inhibitor immediately after diagnosis if they do not have contraindications. An ARB should be considered for those patients developing a dry cough under ACE inhibitor therapy. The potential for cost savings would be even larger if the prevention of cardiovascular events were considered.

PDB45

UNDERSTANDING THE IMPLICATIONS OF INCORPORATING THE UKPDS GLYCAEMIC LEGACY EFFECT INTO EVALUATING THE COST-EFFECTIVENESS OF TYPE 2 DIABETES THERAPIES

McLean P1, Pretyjohns M2, Bergenheim K1
1Tobias Consulting, Malmö, Malmöhus, UK, 2Cardiff Research Consortium Ltd, Cardiff, UK, 3Astrazeneca, Mölndal, Sweden

OBJECTIVES: The UK Prospective Diabetes Study (UKPDS) reported a persistence in risk reduction of diabetes-related events associated with improved glycaemic control observed between intensive and conventional therapy groups beyond the intervention period. This has important implications for projecting short-term clinical trial results over long-term time horizons. The aim of this study was to reproduce the UKPDS legacy effect and assess the impact on long-term cost-effectiveness of diabetes interventions. METHODS: The Cardiff CHOICE 2 Diabetes Model was initiated with cohort profiles consistent with reported intensive versus conventional control groups within UKPDS; initial HbA1c treatment effects were applied and modelled over time assuming two scenarios: a loss of antihyperglycaemia benefit at year 10 or maintenance of a long-term benefit (the legacy effect). Under both legacy scenarios, reductions and cost-effectiveness of sulphonylureas (SU) versus insulin were as assessed over a 40-year time horizon using UK 2010 costs. Both costs and health benefits were discounted at 3.5%. RESULTS: The risk ratio (RR) of any diabetes-related end point predicted by the model was consistent with that reported by UKPDS when incorporating the legacy effect (RR of 0.90 versus 0.91 in the model and UKPDS, respectively). Ignoring the legacy effect resulted in a RR of 0.99 at year 30 and a cost per quality-adjusted life-year (QALY) of £162,400, compared with £12,448-$18,312, representing a cost savings of $6,790-$9,288. Sensitivity analysis would be even larger if the prevention of cardiovascular events were considered.

PDB49

RESOURCE USE IN PATIENTS WITH TYPE 2 DIABETES (T2D) WHO INITIATED EXENATIDE BID (EXBID) OR STARTER INSULIN (INS) THERAPY: 6-MONTH DATA FROM CHOICE

Theodorakis M1, Reaney M2, Bruhn D3, Mathiess S4, Mathiess C5, Kijanski J6, Guerci B6, Sapin H7, Ostenson C8, Salmén Martin C9, Kráup T3
1University of Athens School of Medicine, Athens, Greece, 2Eli Lilly and Company, Windslaw, Surrey, UK, 3Eli Lilly and Company, Indianapolis, IN, USA, 4Diabetes Centre Quakenbrück, Quakenbrück, Germany, 5UZ Gasthuisberg, Leuven, Belgium, 6Eli Lilly & Company Ltd, Warsaw, Poland, 7Institut Molière Jeanne d’Arc, Domont, France, 8Eli Lilly and Company, Paris, France, 9Karolinska Institutet, Stockholm, Sweden, 10Bippebjerg Hospital, Copenhagen, Denmark

OBJECTIVE: This analysis of CHOICE presents resource use data from the six months post and post initiation of adult patients' first treatment with EXBID or INS in the treatment of T2D (EXBID or INS). CHOICE is an ongoing European 6 country prospective observational study. METHODS: Patient data are collected immediately before (baseline), and 3, 6, 12, 18 and 24 months after, initiation of injectable therapy. RESULTS: Important baseline differences between the EXBID and INS cohorts present direct comparison of outcome data. In the EXBID cohort (baseline n=1177, 6 months n=1073) 78.8% patients self-monitored their blood glucose ( SMBG) at baseline; 81.6% at 6 months. Mean (SD) tests/week (past 4 weeks) were 9.0 (6.4) versus 4.8 (4.6) respectively of patients using SMBG. The number of oral antihyperglycaemic medications used was 1.20 (0.75) at baseline and 1.42 (0.73) at 6 months. 93.4% patients had ≥1 contact with a health care professional (HC) in 6 months post EXBID initiation (mean [SD] 7.75 [7.49] visits); 89.1% in 6 months post initiation of T2D therapy (mean [SD] 7.75 [7.41] visits). In the INS cohort (baseline n=1215; 6 months n=1255), 79.8% patients SMBG at baseline, 92.4% at 6 months. Mean (SD) tests/week were 9.91 (8.58) and 13.08 (8.46) respectively. Mean (SD) number of oral antihyperglycaemic medications used was 0.96 (0.76) at baseline and 0.98 (0.77) at 6 months. 93.8% patients had ≥1 contact with a health care professional with CBS in 6 months before INS initiation (mean [SD] 8.45 [9.19] visits); 93.2% in 6 months post initiation (11.16 [7.63]) mean. Mean doses of both EXBID and INS increased during the first 6 months post initiation. In both EXBID and INS cohorts, between-country variability was found. CONCLUSIONS: Mean resource utilisation increased following initiation of injectable therapy. Increases in mean test strip use/week = 55% and SMBG = 86% in the EXBID cohort versus 13% and 24% in the INS cohort. Relative observations for EXBID cohort were -12.7% and -2.7%.

PDB50

REDUCTION IN COMORBIDITIES AND COST SAVINGS ASSOCIATED WITH BIOCHEMICAL CONTROL IN PATIENTS WITH CUSHING’S DISEASE: A LITERATURE-BASED ANALYSIS

Pati D1, Stephens M2, Wiegand P3
1Pharmcuetical North America LLC, Bethesda, MD, USA, 2Novartis, Florham Park, NJ, USA

OBJECTIVE: Hypercortisolism in Cushing’s Disease (CD) is associated with significant comorbidities, which improve and in some cases are reversed with biochemical control (BC). The purpose of this study was to capture data describing comorbidities and cost savings with BC and estimate the potential cost savings associated with reversal. METHODS: Comorbidity reductions with BC were identified through a comprehensive literature search using CD AND epidemiology, morbidity, complications, BC and treatment outcomes as search terms. Selected clinical studies detailed the relationship between comorbidity and BC in adults. In the cost analysis, comorbidities were selected if reported in patients achieving BC. Literature-based cost estimations were identified for CD-related comorbidities from the US payer perspective, and inflated to 2010 USD. Cost ranges were reported based on the difference between expected comorbidity costs in uncontrolled and controlled patients. Sensitivity analyses were conducted to also include possibly reversible comorbidities.

RESULTS: Patients with CD experience comorbidity alterations ranging from body composition related to psychiatric changes, to hypertension and diabetes mellitus. For instance, in the CHOICE study, seven were certainly reversible in CD patients achieving BC. Hypertension and diabetes mellitus were reversed in 44% and 40% of patients achieving BC at 1 year. Psychiatric illness and nephrolithiasis were resolved in 76% and ~50% of CD patients. In CD patients with reported impaired glucose tolerance and overweight/obesity, 60% and 37% of cases were resolved with BC. The application of cost estimates to prevalence of each reversible comorbidity before BC yields a total per patient cost of $19,239-$27,600. With BC, expected comorbidity costs ranged from $12,448-$18,312, representing a cost savings of $6,790-$9,288. Sensitivity analysis including possibly reversible comorbidities (like back pain, osteoporosis and vertebral fractures) produced estimated total cost savings of $10,571-$14,806 (increasing with age and severity of disease).