health states. The scenarios were (A) “good” function with no movement disorders [extrapyramidal symptoms]; (B) “good” function with movement disorders; (C) “bad” function with no movement disorders; (D) “bad” function with movement disorders; (E) hospitalised relapse with no movement disorders; (F) hospitalised relapse with movement disorders; (G) post-hospitalisation with no movement disorders; and (H) post-hospitalisation with movement disorders. A utility value between zero (death) and one (perfect health) for each scenario was calculated using the AQoL. RESULTS: The mean (±SD) utility values for each health state scenario from the general population perspective were [n = 87]: (A) 0.68 ± 0.27; (B) 0.48 ± 0.25; (C) 0.17 ± 0.24; (D) 0.11 ± 0.21; (E) 0.03 ± 0.23; (F) 0.01 ± 0.20; (G) 0.57 ± 0.27; and (H) 0.46 ± 0.24. Those for caregivers were [n = 7]: (A) 0.34 ± 0.18; (B) 0.22 ± 0.22; (C) 0.10 ± 0.20; (D) 0.11 ± 0.22; (E) 0.03 ± 0.10; (F) 0.03 ± 0.13; (G) 0.25 ± 0.22; and (H) 0.31 ± 0.23. The mean (±SD) utility values for the caregivers themselves were [n = 7]: (A) 0.65 ± 0.14; (B) 0.54 ± 0.29; (C) 0.46 ± 0.26; (D) 0.41 ± 0.25; (E) 0.23 ± 0.25; (F) 0.08 ± 0.09; (G) 0.55 ± 0.21; and (H) 0.43 ± 0.22. There was a trend for higher utility values to be associated with better outcomes and lower utility values to be associated with poorer outcomes. CONCLUSIONS: The trends in the utility values were consistent between the general population and caregivers. There was a concomitant decrease in the quality of life of a caregiver with increasing severity of the patient’s condition.

MH4

ADHD-RELATED PATIENT AND FAMILY BURDEN: BASELINE RESULTS FROM THE OBSERVATIONAL STUDY ADORE IN GERMANY

Doepfner M1, Rothenberger A2, Finnern H3, Lorenzo M, Ralston S4, Dittmann R5

1University of Cologne, Cologne, Germany; 2Georg-August-University Gottingen, Gottingen, Germany; 3Lilly Deutschland GmbH, Bad Homburg, Germany; 4Eli Lilly and Company Ltd, Windsbridge, UK

OBJECTIVES: To present preliminary baseline data on patient and family burden associated with Attention-Deficit/Hyperactivity Disorder (ADHD) symptoms in German patients enrolled in the ADORE study (Attention Deficit Hyperactivity Observation Research in Europe). METHODS: ADORE is an ongoing 24-month, pan-European, prospective, observational study to describe the relationship between treatment regimen prescribed and quality of life in ADHD. Only those patients were documented that had not formally been diagnosed with ADHD before. RESULTS: In total, 392 patients with a mean age of 8.7 (SD 2.1) years with inattentive/impulsive/hyperactive symptoms were enrolled, of which 300 (77%) were male. Patient birth/maternity problems included: smoking in 37 cases (15%), maternal drug/alcohol abuse in 8 cases (2%), 37 patients (9%) were born prematurely, 23 (6%) had low birth weight, and in 79 cases (20%) other birth/maternity problems were experienced. Past history of inattentive/impulsive/hyperactive symptoms in the immediate family was reported for 171 patients (44%), 29 cases (7%) in the extended family, and 13 cases (3%) in both the immediate and extended family. A total of 130 mothers (33%) and 41 fathers (10%) experienced emotional problems due to the patient’s symptoms. During the last 6-months, 47 (12%) patients experienced some exclusions from school lessons, 48 (12%) were in special educational programs, and 30 (8%) were requested to change to a special needs school. Thirty-six patients/families (9%) had contact with social services, 7 (2%) had contact with the police. Over the last 4 weeks, 134 patients (34%) were involved in bullying, as the victim (N = 49; 13%), the bully (N = 58; 15%), or both (N = 27; 7%). Seven patients (2%) reported current tobacco use/abuse, 2 (<1%) cannabis use/abuse, and 4 (1%) alcohol use/abuse. CONCLUSIONS: Baseline data suggest that ADHD symptoms are associated with a considerable burden on patients and families in terms of school behavior, social activities, and emotional problems.

DIABETES

ASSOCIATION BETWEEN ANTIPSYCHOTIC DRUGS AND DIABETES MELLITUS: A PHARMO STUDY

Erkens JA1, Pugner K2, Lapuerta P3, Herings RMC4

1PHARMO Institute, Utrecht, The Netherlands; 2Bristol-Myers Squibb International Corporation, Waterloo, Belgium; 3Bristol-Myers Squibb Company, Princeton, NJ, USA

OBJECTIVES: The aim of this study was to investigate whether the use of conventional antipsychotics and newer atypical antipsychotic drugs, such as olanzapine, risperidone or quetiapine, is associated with an increased incidence of diabetes mellitus. METHODS: Data were obtained from the PHARMO Record Linkage System comprising pharmacy records and hospitalisations of all 950,000 community-dwelling inhabitants of 18 geo-demographic defined areas in the Netherlands from 1991 until 2003. In a nested case-control study among users of antipsychotic drugs, 1365 cases and 8143 controls with a hospitalisation for diabetes or who were using antidiabetic drugs (index date) matched on age, sex, and calendar year were selected. Use of antipsychotic drugs among cases and controls was determined over three months prior to the index date. Conditional logistic regression was performed to estimate odds ratios and 95% confidence intervals (CI). RESULTS: Compared with no antipsychotic use, use of olanzapine, conventional antipsychotic drug and other newer atypical antipsychotics, but not risperidone (OR adjusted 1.17 (95%CI: 0.61–2.23), are associated with a significant increase in the risk of diabetes (OR adjusted 2.52 (95%CI: 1.21–5.26), 3.22 (95%CI: 2.70–3.84) and 2.22 (95%CI: 1.05–4.69), respectively). Cases and controls who used conventional antipsychotic drugs were older than the other atypical antipsychotic drug groups. CONCLUSIONS: Our results suggest that use of conventional antipsychotics, olanzapine, and other newer antipsychotics (clozapine, sertrindole and remoxipride), but not risperidone, was consistently associated with an increased risk of diabetes. It is therefore important to stress that the metabolic consequences of antipsychotic drug therapy should be considered by the treating physicians.

DB2

LABOR MARKET EFFECTS OF INSULIN DEPENDENT AND NON-INSULIN DEPENDENT DIABETES AMONG CANADIAN LABOR FORCE

Farahati F

McMaster University, Hamilton, Ontario, Canada

OBJECTIVE: This is the first study to estimate the impact of diabetes on the probability of working and weekly work hours for Canadian with insulin dependent diabetes (IDDM) and non-insulin dependent diabetes (NIDDM) and diabetes related comorbidities/complications. METHODS: Two-part model were performed to predict the weekly work hours (after adjusting for other chronic disorders and socio-demographic) of diabetics among respondent to the Canadian Community Health Survey 2001. Logistics regression and multiple OLS analyses were used to predict the probability of employment and weekly work hours. RESULTS: Women and men with IDDM had lower probability of having job by 10% and 5%, respectively compared with healthy groups. These probabilities were smaller for women
and men with diabetes-related comorbidities/complications by 13% and 5% compared to IDDM without diabetes-related comorbidities/complications. The probability of working for women and men with NIDDM also were 7% and 2% less than women and men without this disorder. Similarly, these probabilities were even smaller for women and men with NIDDM without diabetes-related comorbidities/complications by 2% compared to NIDDM. Decreased rates of major hypoglycaemic events (all at p-values <0.05). The predicted weekly work hours for women and men with diabetes were 29 and 41 hours, with IDDM were 18 and 30, with IDDM and comorbidities/complications were 13 and 23, with NIDDM were 21 and 35 hours and finally with NIDDM and related comorbidities/complications were 17 and 30, respectively. CONCLUSIONS: The effect of diabetes and its related comorbidities especially for men with NIDDM and related comorbidities/complications on the probability of unemployment and predicted weekly work hours in Canada are substantial. The results of this study have implications for cost-effectiveness of diabetes control and may facilitate studies of the health burden of diabetes for the prevention and treatment of diabetes and thus increase the labor productivity.

DB3
DECREASED RATES OF MAJOR HYPOGLYCAEMIC EVENTS LEAD TO IMPROVED LONG TERM COST EFFECTIVENESS OF BIPHASIC INSULIN ASPART 30/70 VERSUS BIPHASIC HUMAN INSULIN 30 IN TYPE 2 DIABETIC SUBJECTS IN DANISH, FINNISH, GERMAN, NORWEGIAN, SPANISH, SWEDISH, AND UK SETTINGS
Lammet M1, Palmer Aj, Roze S2, Minshall ME3, Valentine WJ4
1Novo Nordisk A/S, Bagsvaerd, Denmark; 2CORE Center for Outcomes Research, Binningen/Basel, Switzerland; 3CORE-USA, Fishers, IN, USA
OBJECTIVES: A 24-month randomised, open-label parallel group study in type 2 diabetes patients compared the safety and efficacy of biphasic insulin aspart (BIAsp30/70) and biphasic human insulin (BHI30/70) injected twice daily before meals. Major hypoglycaemic episodes were reduced with BIAsp30/70 (annual rate 4.1%) versus BHI30/70 (annual rate 15.5%) and were significantly lower in the second study year (p = 0.04). Glycaemic control did not differ between groups. A peer-reviewed, validated model projected the impact of the different rates of major hypoglycaemia events on long-term health economic outcomes in multinational settings. METHODS: The CORE Diabetes model employs standard Markov/Monte Carlo simulation techniques to describe long-term incidence and progression of diabetes-related complications. Transition probabilities were derived from major diabetes studies. The clinical effects of the comparators were derived from the trial described. The analysis was performed in multinational settings using published country-specific costs, health care resource utilization, clinical data, and recommended discount rates. A lifetime horizon and payer perspective was taken. Only direct costs were considered. Sensitivity analyses was performed. RESULTS: Discounted quality-adjusted life years (QALY) were improved by 0.15–0.22 years with BIAsp30/70 versus BHI30/70 depending on country specific discount rates. Increases in lifetime costs were seen with BIAsp30/70 in all settings. Costs per QALY were DKK611,922, 9784€, 12,840€, NOK38,911€, 14,068€, SEK76,495€, and £6,585 in the Danish, Finnish, German, Norwegian, Spanish, Swedish, and UK setting respectively. Results were most sensitive to assumptions regarding major hypoglycaemia rates, mortality following major hypoglycaemic events, HbA1c changes and to the relative costs of BIAsp30/70 versus BHI30/70. CONCLUSIONS: Treatment with BIAsp30/70 was projected to result in additional QALYS and reduced health care costs associated with major hypoglycaemic events versus treatment with BHI30/70. The higher acquisition costs of BIAsp30/70 led to increased overall costs, but the incremental cost/QALY fell within the range generally considered to be cost-effective in each country.

DB4
PROOF OF CONCEPT OF A WIRELESS APPROACH FOR ENABLING COMMUNICATIONS BETWEEN GERMAN PHYSICIANS AND THEIR PATIENTS WITH TYPE 2 DIABETES TREATED WITH NATEGLINIDE
Netterton DR1, LeVine P2
1InfoMedics, Inc, Woburn, MA, USA; 2InfoMedics, Inc, Philadelphia, PA, USA
OBJECTIVE: We report on the results of proof-of-concept study designed to encourage patient adherence to treatment guidelines and allow German physicians treating patients with Type-2 diabetes with nateglinide to gain patient feedback using an entirely wireless design. Subject Sample: 60 patients and 5 physicians agreed to participate in the study. METHODS: Using mobile communications devices, patients reported on their medication-taking experience and clinical values, including blood glucose levels, according to a clinical protocol have five (5) patient reporting events during the study period of 14 days. This information was then delivered via dedicated web technology to treating physicians. RESULTS: Participating physicians enrolled an average of seven patients in the study. Each physician visited the website an average of 40 times. Twenty-one percent of these visits involved the physician reviewing individual patient responses. Sixty percent of physicians agreed that their understanding of the medication and of the condition was improved by their participation in the study. Sixty-five percent of patients reported believing that the wireless handset device was easy to use, and 71% noted that the screen of the device was acceptable for reading, navigating and entering information about their condition. CONCLUSIONS: In a small, proof-of-concept study designed to assess the viability of entirely automated communications among physicians and patients regarding treatment and clinical endpoints in Type-2 diabetes, both physicians and patients were able to use the system without significant difficulty and reported favorable experiences with the approach.

UC1
HEALTH ECONOMIC COMPARISON OF CONTINUOUS SUBCUTANEOUS INSULIN INFUSION WITH MULTIPLE DAILY INJECTION FOR THE TREATMENT OF TYPE 1 DIABETES IN THE UK
Zakrzewska K1, Roze S2, Valentine WJ3, Palmer Aj4
1Medtronic AG, Tolochenaz, Switzerland; 2CORE Center for Outcomes Research, Binningen/Basel, Switzerland
OBJECTIVES: The aim of this study was to project the long term costs and outcomes of continuous subcutaneous insulin infusion (CSI) compared with multiple daily injection (MDI) in patients with type 1 diabetes (T1D) in the UK. METHODS: The CORE Diabetes Model is a peer-reviewed, validated model that employs standard Markov/Monte Carlo simulation techniques to describe the long term incidence and progression of diabetes-related complications. Baseline cohort characteristics were taken from published studies of T1D in the UK (mean age 26 years, duration of diabetes 12 years, 54% male, 90% Caucasian, mean HbA1c 8.68%). Transition probabilities were derived from major diabetes clinical studies. Effects associated with CSII and MDI deliv-