twice per year were considered to have frequent hypos. Logistic regression was used to evaluate the link between obesity and frequent hypos, controlling for age, gender, country, and insulin use. Generalized linear models quantified the relationship between health care use and patient characteristics, including obesity, frequent hypos, and insulin use. **RESULTS:** Height and weight data were available for 2,780 T2D patients in France, Germany, and the UK. Obesity was more common among patients in Germany (51.0%) and the UK (53.4%) than France (43.9%, both $p<.05$); frequent hypos were more common in France (16.5%) and the UK (13.2%) than Germany (8.2%, both $p<.05$). Overall, patients with frequent hypos were more likely to be obese (57.6% vs. 49.1%, $p<.01$), female (40.6% vs. 32.7%, $p<.01$), insulin users (36.7% vs. 17.5%, $p<.001$), and have HbA1c ≥7.0% (61.3% vs. 49.4% of those reporting HbA1c, $p<.01$) than other patients. Obesity and frequent hypos were associated after adjusting for covariates (OR = 1.27, $p<.05$). Multivariable models of health care use showed frequent hypos were associated with more physician and ER visits, and obesity was associated with more physician visits and hospitalizations (all $p<.05$). **CONCLUSIONS:** Obese patients are at increased risk for moderate/severe hypoglycemia, and both obesity and hypoglycemic events are associated with more health care use. Improving management of obesity among T2D patients may reduce the impact of diabetes on health care systems in Europe.

PDB74

EFFECTIVE HEALTH CARE BUDGET PLANNING FOR INNOVATIVE DRUGS IN DIABETES TREATMENT IN TURKEY; FROM THE PERSPECTIVE OF THE SOCIAL SECURITY INSTITUTION (SSI)

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OBJECTIVES: Diabetes therapies constitute one of the highest budgets allocated by the Social Security Institution (SSI) each year in Turkey (within top 15). However, a standard budget allocation plan for reimbursement of innovative drugs in diabetes does not exist in Turkey. This study aims to offer a perspective for effective health care budget planning for innovative drugs in diabetes for the SSI in order to achieve patient access. **METHODS:** Total budget spent by SSI for diabetes treatment is analyzed for the last three years. All treatment groups are defined for % unit and Turkish Lira (TL) growth and those values are investigated relative to the total diabetes budget. The current budget allocation structure for innovative drugs is defined and a new methodology is offered. **RESULTS:** The highest budget in diabetes is allocated for human insulin analogues with a total spending of 949,278,748 TL (45.7%), followed by glitazones 388,374,291 TL (18.7%) and sulphonylurea 244,190,634 TL (11.8%). However, the total budget allocated for innovative drugs as DPP-4 inhibitors and GLP-1 agonists is around 4.2%. The following steps for forward planning of budgets are proposed: Analysis of each treatment option within the same group with respect to effectiveness; defining reimbursement conditions (price-volume) for each option based on effectiveness; analysis of each treatment group with respect to effectiveness; defining budget allocated for each treatment group based on effectiveness; biannual review of the budget realizations. **CONCLUSIONS:** Re-evaluation of current therapies in terms of budget contributions and effectiveness may identify savings in SSI budget that could be freed up for new treatment options becoming available. A stepwise approach including the reevaluation of existing treatments in diabetes would be necessary in Turkey.

PDB75

ASSOCIATION BETWEEN HYPOGLYCAEMIC EVENTS AND SHORT-TERM DISABILITY AMONG PATIENTS WITH DIABETES BEING TREATED WITH INSULIN USING A CLAIMS DATABASE APPROACH

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OBJECTIVES: To evaluate the association between hypoglycaemic events (HEs) and short-term disability (STD) using a retrospective case-control design among patients with diabetes receiving insulin therapy within a claims database. **METHODS:** U.S. medical claims data was obtained from Thomson Reuters MarketScan Commercial, Medicaid, and Health and Productivity Management databases from 1 January 2007 to 31 December 2009. Patients were selected if they were enrolled in a health plan, eligible for STD for ≥12 months from the first date of an anti-diabetic drug claim (index start date), and had ≥1 insulin claim. Analysis was performed comparing patients who had at least 1 HE claim entered to those who had none. HEs were defined based on ICD-9CM codes: 250.8, 251.0, 251.1, or 251.2 and probably were serious/significant events entered on behalf of the patient. STD was measured by a binary indicator, number of cases, and total days absent from work. The relationship between HEs and STD was evaluated before and after adjusting for covariates. Regression models were used to adjust for known influential covariates (duration of index period and Charlson Comorbidity Index) and fixed effects (sex, age group, region, health plan type, employment status, diabetes type, prescription regimen, and diabetic complications). **RESULTS:** There were 15,020 patients who met the inclusion criteria with a mean index period of 2.4 years. 478 (3.2%) had experienced ≥1 HEs and 3893 (25.9%) ≥1 STDs. The odds of having ≥1 STDs for those with ≥1 HEs was 74.7% higher than those with no HE (Adjusted OR: 1.747; 95% CI: 1.429, 2.135). Patients reporting HEs had an average of 3.24 more days of absence from work per year due to STDs than patients without HEs after adjusting for the covariates. **CONCLUSIONS:** Results indicate a significant association between experiencing HEs and the occurrence of STD among patients receiving insulin therapy.

PDB76

CLINICAL EFFECTIVENESS OF INCREASED PHYSICAL ACTIVITY IN TYPE 2 DIABETES, SYSTEMATIC REVIEW

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OBJECTIVES: To investigate the clinical effectiveness of increased physical activity within adults with type 2 diabetes. **METHODS:** A systematic review was undertaken to identify relevant randomized controlled trials (RCTs). MEDLINE, EMBASE and the Cochrane databases were searched for RCTs up to December 2010 as well as for systematic reviews to identify further RCTs. Reference lists were screened. For inclusion into the review, studies had to compare increased physical activity to no such an intervention with a follow-up period of at least 24 weeks. Patient-relevant outcomes were predefined: all-cause mortality, cardiovascular morbidity and mortality, health-related quality of life (HRQoL), end-stage renal disease, amputation, retinal damages, hypoglycemia and adverse events. The risk of bias of each individual study was assessed. **RESULTS:** Eight RCTs met the inclusion criteria and reported on predefined outcomes. The following interventions were compared to no such an intervention: endurance-training/strength-training or sessions with mixed (aerobic and resistance) training. The studies included 1202 patients with a mean age of 60 years. Only for the endpoints HRQoL and adverse events properly reported results were found: 4 studies analyzed HRQoL but all used different outcome measures, only one of the studies reported a statistically significant effect. 6 studies presented data on adverse events, 4 of them incompletely, 2 of them showing no significant treatment effect **CONCLUSIONS:** Although there is a vast body of literature on physical activity in adults with type 2 diabetes only 8 studies met the inclusion criteria. Evidence on patient-relevant endpoints was scarce, as most studies focused on HbA1c as their primary endpoint. We found no effect of increased physical activity on HRQoL and adverse events in patients with type 2 diabetes. Conclusions for other endpoints could not be drawn. Thus, there is a great demand for further studies with patient relevant primary endpoints.

PDB77

CHARACTERISTICS OF PATIENTS WITH DIABETES IN SOUTHWESTERN ONTARIO, CANADA

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OBJECTIVES: Although Canada is reputed to be an international leader in diabetes surveillance, there are gaps in knowledge about effectiveness of management, resource utilization and health outcomes of people being treated for diabetes. The objectives of this study were to follow a cohort of newly diagnosed persons with diabetes in South-Western Ontario (SWO) over a 5-year period to document epidemiology, management, baseline characteristics, clinical outcomes and resource utilization. **METHODS:** Data from this cohort were compared to an age and gender matched control group of individuals without diabetes. Regression analyses were conducted to evaluate the impact of anti-diabetic medications on glycemic levels and control after adjustment for age, gender and baseline HbA1c. **RESULTS:** A total of 3861 individuals with newly diagnosed diabetes in 2002 were identified. The mean HbA1c levels increased from 7.4% at time of diagnosis to 8.21% at the end of the study in 2008. A similar trend was observed for fasting glucose levels (6.71% at baseline to 7.41% in 2008). After controlling for covariates, regression analysis results indicates that continuous and intermittent use of anti-diabetic drugs compared to no drug use had no significant impact on 2-year HbA1c levels. Further, the results of our study indicate that a large proportion of the cases had uncontrolled hypertension and hyperlipidemia. An interesting finding is that the average number of physician visits decreased from 7.9 per year at baseline to 4.8 at the end of 5 years in cases, whereas in controls, physician visits increased from an average of 6.8 at baseline to 7.4 five years later. Hospitalizations decreased over time from an average of 6 days at baseline, to 2.4 days at the end of 5 years. **CONCLUSIONS:** Consistent with other studies, these findings suggest that a minority of people with diabetes in South-Western Ontario achieved optimal glycemic control.

PDB78

DETERMINANTS OF TREATMENT CHANGES OF ORAL ANTI/DIABETIC DRUGS IN THE UK

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OBJECTIVES: In the UK, Oral Anti-Diabetic drugs "OAD" are administered to control hyperglycaemia in type 2 diabetes when HbA1c exceeds 48mmol/mol. Guidelines are designed to improve HbA1c response through regimen change. The aim is to examine factors associated, especially HbA1c, with treatment regimen change in clinical practice. **METHODS:** All patients who initiated an OAD (except rosiglitazone) in the GPRD database between 1/1/2006 and 25/2/2011 were included. HbA1c was assigned to baseline and to each year following OAD initiation. The median HbA1c is hereby reported using the mmol/mol scale. Each patient was classified as augmenter, switcher, discontinuer or control (no change). This status was updated at each year since OAD initiation; multinomial logistic regression models were used to assess factors associated with treatment change; the odds ratios "OR" (with 95% confidence interval) represent the relative likelihood of change versus no change. **RESULTS:** Of 63060 patients 34737 had HbA1c recorded around 1 year since OAD initiation. HbA1c at one year was associated with treatment changes at the same time, being highest for augmentation with insulin (80 mmol/mol), augmentation with OAD (68), switching (63) and lowest for discontinuation and controls (both 51). Similar results were seen at subsequent years. At one year since OAD initiation, the adjusted regression model confirmed the increased HbA1c and chance of augmentation (OR=2.8 per 10mmol/mol increase; 2.7-2.9), switch (OR=2.4; 2.2-2.5) and discontinuation (OR=1.1; 1.1-1.2). Baseline use of gliclazide was also associated with increased augmentation (OR=1.6; 1.3-2.0),