goal, the proportion of and time to A1C increasing above 7% (relapse) were analyzed. Cox proportional hazard models were estimated to identify demographic and clinical predictors of A1C goal achievement and relapse. RESULTS: Basal insulin initiators with T2DM (n = 13,373) were on average 60 years old, 50.5% were females, 59.5% had A1C ≥8%, 59.7% were obese, and more than half used metformin (52.7%) or sulfonylureas (53.4%) before insulin initiation. A total of 584 (4%) patients reached goal one year since initiation, and 7,699 (56%) reached goal during the 2.5-year follow-up. The median time to reaching goal was 536 days (95% CI: 510-562). Older age, being white or male, lower baseline A1C values and no OAD use before insulin initiation were associated with significantly higher rates of reaching goal. Among the patients who reached goal, 57.6% relapsed, and the median time to relapse was 398 days (95% CI: 383-417). Being Hispanic, higher baseline A1C values and OAD use at baseline were associated with significantly higher rates of relapse. CONCLUSIONS: A high proportion of T2DM patients did not have adequate glycemic control after initiating basal insulin. Various factors existing prior to insulin initiation were related to successful treatment for T2DM. Further research into how to improve glycemic control is encouraged.

PD67 TREATMENT PATTERNS AND HEALTH OUTCOMES AMONG TYPE 2 DIABETES WITH COMORBID OBESITY IN FRANCE, GERMANY, AND UK

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OBJECTIVES: The aim of the current study was to examine patient characteristics, treatment patterns, and burden of type 2 diabetes (T2D) adult patients with and without comorbid obesity in France, Germany, and UK.

METHODS: Data from the Europol Health and Wellbeing Survey (2006-2010) were analyzed. A high proportion of T2DM patients are obese. Obesity was as-sociated with older age, higher BMI, and lower income. The proportion of obese T2D patients was significantly higher (23% vs. 16%, p < 0.05) among obese patients, but this difference was significantly higher (23% vs. 16%, p < 0.05). Hypertension differences were significant only in Germany and UK and not in France. Hypertension and high cholesterol differences were only significant in Germany and UK. Obesity was associated with significantly worse physical quality of life (France: 40 vs. 44, Germany: 39 vs. 44, UK: 37 vs. 42, respectively p < 0.05).

CONCLUSIONS: A substantial number of T2D patients are obese. Obesity was associated with worse quality of life, and worse health outcomes including poor glycemic control (in the case of Germany), hypertension and high cholesterol, all these factors are CV disease risk factors. Improving obesity management will be key to achieve the health and key outcomes in T2D.

PD68 THE IMPACT OF IMPLEMENTING A DRUG PREAUTHORIZATION POLICY IN A PRIMARY CARE SETTING

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OBJECTIVES: We analyzed the impact of implementing a preauthorization policy for Rosiglitazone (an anti-diabetic drug) use on the eligibility requirements (treatment initiation and discontinuation) and patients’ HbA1c levels. METHODS: We compared treatment patterns of diabetic patients prior to and after an implementation of a preauthorization policy for Rosiglitazone use. Data were obtained from the Maccabi Healthcare Services’ (the second largest HMO in Israel) database of diabetic patients. We compared adherence to eligibility criteria in a group of patients who received Rosiglitazone without preauthorization (N=1362) and patients who received the medication with preauthorization (N=824). The criteria for receiving Rosiglitazone in both groups were identical and included prior medication [expected patients received drug from the sulphonylurea class in combination with Metformin for at least a three months period], and laboratory criterion [HbA1c levels higher than 8% during the past three months]. Treatment should be continued only if withing three months from treatment initiation, the patient ac-
quired at least three packages of Rosiglitazone and a decrease of ≥0.8% in HbA1c values was observed. RESULTS: implementation increased the fulfillment of the eligibility criteria (medication and laboratory) for drug use by 41% [from 25% of patients without preauthorization to 35% with preauthorization (p < 0.001)]. With regard to meeting the requirements for treatment continuation after a three month period, there was an increase of only 6.4% in the fulfillment of both requirements (from 37.6% to 40.0% prior and after preauthorization, respec-
tively). The average decrease in patients’ HbA1c levels was 0.6% and was similar in both patients with and without preauthorization. CONCLUSIONS: Implementing preauthorization for Rosiglitazone resulted in an increase in meeting the require-
ments for treatment initiation and a marginal change in treatment continuation criteria, but this increase was insufficient to achieve HbA1c target levels. However, patients’ health was not negatively affected by this policy.

PD69 PRESCRIPTION PATTERN STUDY OF TYPE 2 DIABETES MELLITUS IN IRAN

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OBJECTIVES: Type 2 diabetes, is a disease with a rising prevalence worldwide. A major burden of this disease would be shared by developing countries like Iran. Medications used to treat diabetes need to be taken for the entire life and factors like efficacy, side effects, drug interactions and cost of therapy should be consider. This study was designed to evaluate the prescription pattern of anti-diabetic drugs in T2DM patients from 2006 to 2009 in Iran. METHODS: A retrospective study was undertaken to review prescriptions during 4 years. All prescriptions which were collected in special software called Rx Analyst during the study period in the NCRUD were reviewed for prescriptions included anti-diabetic drugs. The brand names of drugs in prescriptions were decoded to generic names, according to standard international drug list. RESULTS: A total of 261,110,666 prescriptions were assessed in which 11,637,224 were detected to be included at least one dosage form of anti-diabetic medications. From all, 1,376,750 prescriptions had at least one injection form of Insulin and 10,260,474 of oral anti diabetic drugs. Trend evaluation of prescribing showed that the total number anti-diabetic medications were in-creased from 44% to 51% (2006 to 2010). The rates of being uncontrolled (HbA1c ≥7%) among patients did not have adequate glycemic control after initiating basal insulin. Var-
ious factors existing prior to insulin initiation were related to successful treatment for T2DM. Further research into how to improve glycemic control is encouraged.

PD70 LOW-DOSE PIOSULFONYLGLITAZONE UTILISATION IN PATIENTS WITH TYPE 2 DIABETES MELLITUS IN THE UNITED KINGDOM

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OBJECTIVES: To evaluate the implementation of pioglitazone (PIO) daily dose pre-
scribed by physicians for patients with type 2 diabetes mellitus (T2DM).

METHODS: In a retrospective cohort study using the UK MediPlus database, patients with diagnosed T2DM who received PIO prescription between July 2008–June 2009 (ob-
ers from 16 countries) were included. Prescription records were used to assess baseline conditions. Patients were grouped, according to prescriptions in the observation period, as low-dose users who received PIO prescriptions of 15 mg daily dose or were down-titrated to 15 mg from a higher daily dose, and high-dose users for the rest who received a 30 mg or higher daily dose. RESULTS: Of 151 patients with T2DM who received PIO prescriptions, 48% received at least one 15 mg prescription during the observation period. Among all PIO prescriptions, 39%, 40%, and 21% were in 15, 30, and 45 mg or higher daily dose, respectively. Per study definitions 38% of the patients were classified as low-dose users and 62% as high-dose users. Low-dose users were more likely to be female (61% vs. 44%) and had a lower baseline prevalence of diabetic nephropathy (0% vs. 1%), compared to high-dose users (p < 0.05). Low-dose PIO use was not associated with baseline prevalence of congestive heart failure, coronary artery disease, or bone fractures. CONCLUSIONS: Low-dose PIO prescribing is common, and one-third of PIO pre-
scriptions, regardless of patient age and major comorbidities. The reason(s) why patients received low-dose PIO warrants further investigation.

PD71 CROSS-SECTIONAL ANALYSIS OF AMBULATORY CARE EXPENDITURE AMONG PATIENTS WITH TYPE 2 DIABETES MELLITUS (T2DM) ACCORDING TO TREATMENT STAGE AND RENAL FUNCTION IN FRANCE USING EGB DATABASE

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OBJECTIVES: This retrospective study compares annual expenditures among T2DM patients according to treatment stage and renal function status (RFS) and identifies determinants of costs. METHODS: T2DM patients’ records were extracted from the EGB database, which contains ambulatory care claims for a representative sample of the French population. Patients were classified according to treatment stage: oral / GLP1 monotherapy, double therapy, triple therapy or insulin therapy (either associated or not with other antidiabetics), and according to RFS (identified using pharmacy, lab and consultation claims). Costs were estimated from the national insurance perspective and included all reimbursements except for hospitalisations. Annual expenditures were assessed by year (from 2005 to 2010), by treatment stage and by RFS. Effects of treatment stages and RFS on expenditures by year were analysed by means of generalised linear models, with matching on age and gender.

RESULTS: The number of patients ranged from 9,682 to 11,772 between 2005-2009. Annual average reimbursed expenditures were €4,279 (standard error: 65.5) for monotherapy, €3,592 = 92.1 for double therapy, €3,803 ±157.2 for triple therapy and €7,729 ±180.8 for insulin therapy. The same cost pattern was found in previous years. The regression model showed that costs increased by a ratio of 2.31 (p < 0.001) from monotherapy to insulin therapy, adjusted for socio- demographic characteristics and co-conditions. Excess costs for insulin therapy were mainly related to nursing care (increasing by a ratio of 12.16, p < 0.001).
ial devices and pharmacy costs. Reimbursements for patients with declining renal function were estimated at €4,933 - €509.4 for monotherapy, €4,521 - €530.8 for dou-
ble therapy, €4,191 - €497.9 for triple therapy and €4,176 - €1106.2 for insulin therapy. **CONCLUSIONS:** Overall, ambulatory care costs increase with treatment ecastration and declining renal function amongst T2DM patients. Insulin therapy is associated with substantial increased costs, related to pharmacy, nursing care and medical device utilization.

**PD87**

**THE BURDEN OF HYPOGLYCAEMIA IN SECONDARY CARE IN ENGLAND**

**OBJECTIVES:** Hypoglycaemia is a common adverse event associated with the man-
agement of both type 1 and type 2 diabetes. While many hypoglycaemic episodes can be self-treated, more severe episodes can require emergency treatment and hospitalisation. The objective of our study was to evaluate the burden of hypoglycaemia in secondary care. Hypoglycaemia was estimated as the third most costly prescribed item and glucose blood testing reagents was high - the third most costly prescribed item and

**RESULTS:** Using Hospital Resource Group (HRG) tariff prices in England for the respective inpatient spells. In 2006 the average inpatient length of stay was 5.7 days, but by 2009 this figure had risen by 21.1% to 6.9 days. In 2006 the cost of hypoglycaemia due to hospitalisation was £153.57 million. In 2009 this figure was £16.04 million, representing an 18.2% increase in cost burden. In 2009 the average inpatient spell was £163.5, up 8.7% from 2006 when the average cost was £150.4. Over the four year period 2006-2009 there were a total of 41,177 inpatient spells due to hypoglycaemia at a total cost of £58.44 million. **CONCLUSIONS:** Hypoglycaemia represents a sig-
ificant cost to the healthcare system and needs to be managed better to reduce the risk of hospitalisation due to hypoglycaemia.

**PD875**

**IMPACT OF EPIDEMIOLOGICAL AND ECONOMIC FACTORS ON INSULIN TOTAL SALES IN THE UK DIABETIC MARKET**

**OBJECTIVES:** Diabetes affects 3%–5% of total UK population and insulin is the larg-
est drug-class category used to treat the disease. A greater understanding of the im-
 pact of epidemiological and economic factors on total insulin sales will help the healthcare system and pharmaceutical industry be more responsive to demand and cost. **METHODS:** Generalized least squares regression with period random effects was used on a pooled yearly data set (2001 to 2010) of variables. The dependent variable was total yearly sales for insulin. The explanatory variables included - size of population, incidence and prevalence of diabetes; estimated total prescription (Rx) for insulin, and employee compensation per capita. The analysis, with a mean age of 58.15 years (SD 9.16) with 50.7% males having mean scores of 7.44 (SD = 3.08). Medication adherence scores ranged from 0 to 8 with mean scores of 6.11 (SD = 1.66). HbA1C was found to be significantly lower in patients with higher level knowledge and higher level of medication adherence (p < 0.05). Significant correlations were found between the three variables HbA1C, Knowledge and adherence (ρ = 0.05). Combined therapy, higher diabetes knowledge and higher medication adherence were statistically predictors of good glycemic control. **CONCLUSIONS:** There is a high prevalence of poor glycemic control among patients in this study. This study revealed that knowledge and adherence are among the modifiable factors that are associated with better glycemic control.