sion analysis was employed to assess impact of socioeconomic, demographical and disease-specific variables on WTP for QALY. RESULTS: Totally, 149 patients with type 1 and 2 diabetes were included in analysis. Types 1 were younger with higher probability of hospitalization and longer diabetes duration. Foot diabetic disease, eye disease- specific variables on WTP for QALY. CONCLUSIONS: TTM helps type 2 diabetic patients self-manage their condition, and to reach their goals, hence achieving better clinical outcomes, and quality of life.

PD113 INTENSIFICATION OF BASAL INSULIN TREATMENT AMONG PATIENTS WITH DIABETES MELLITUS TYPE 2 IN THE NETHERLANDS

OBJECTIVES: To characterise type 2 diabetes (T2DM) patients in the Netherlands initiating basal insulin and those intensifying treatment. METHODS: Antibiotic dispensing records were obtained using data from the Out-patient Pharmacy Database. Results: New users, i.e. first-time dispensing, of basal insulin only were selected between 2007-2012. Treatment intensification was defined as either add-on of GLP-1, bolus insulin or DFP-4i or switch to premixed insulin. Patients, the body mass index and the body weight. The analysis was made from the and the insulin: 63 (53-73) years, 50% male, 88%, 78% and 54% had an HbA1c at intensification >64 mmol/mol, respectively. Intensification mostly was add-on of bolus insulin (58%) or switch to premixed insulin (39%). Median (IQR) time to intensification was 8 (2-15) months. Among patients with an HbA1c >53, 58 and 64 mmol/mol (IQR time to intensification 5 (2-23), 12 (5-22) and 12 (5-22) months, respectively. Post-intensification, 52%, 73% of the patients attained an HbA1c ≤53, ≤58 and ≤64 mmol/mol, respectively, with a positive trend of T2DM patients initiating basal insulin intensifying their treatment leading to glycemic goal attainments of HbA1c ≤35, ≤58 and ≤64 mmol/mol in 32%, 52% and 73% of patients, respectively. Further research might provide more information on the underlying reasons and potential barriers for intensifying versus not intensifying, such as patient characteristics, co-medication, treatment complexity and occurrence of hypoglycaemic events.

PD114 EFFICIENCY OF A PERSONALIZED CARE MODEL IN DIABETES AS AN EXAMPLE OF CHRONIC DISEASE WITH INFORMATION AND COMMUNICATION TECHNOLOGY SUPPORT

OBJECTIVES: To evaluate the clinical and the economic outcomes of a personalized care model (PCM) in diabetes mellitus (DM) supported by information and communication technology (ICT) in the Spanish National Health System (NHS). METHODS: We evaluated a PCM in DM proposed by a group of European experts based on 6 steps: 1. Structured documentation; 2. Structured data analysis; 3. Personalized treatment; 4. Evaluation of results. A literature review was made to assess the results of interventions that used the PCM described. Interventions evaluating patients with T2DM. 1, 1. T2DM (type 1 insulin: 63 (53-73) years, 50% male, 88%, 78% and 54% had an HbA1c at intensification >64 mmol/mol, respectively. Intensification mostly was add-on of bolus insulin (58%) or switch to premixed insulin (39%). Median (IQR) time to intensification was 8 (2-15) months. Among patients with an HbA1c >53, 58 and 64 mmol/mol (IQR time to intensification 5 (2-23), 12 (5-22) and 12 (5-22) months, respectively. Post-intensification, 52%, 73% of the patients attained an HbA1c ≤53, ≤58 and ≤64 mmol/mol, respectively, with a positive trend of T2DM patients initiating basal insulin intensifying their treatment leading to glycemic goal attainments of HbA1c ≤35, ≤58 and ≤64 mmol/mol in 32%, 52% and 73% of patients, respectively. Further research might provide more information on the underlying reasons and potential barriers for intensifying versus not intensifying, such as patient characteristics, co-medication, treatment complexity and occurrence of hypoglycaemic events.

PD115 ENHANCED CONVERSATION MAPS AND HEALTH OUTCOMES: A SYSTEMATIC LITERATURE REVIEW

OBJECTIVES: To identify, describe in detail, and assess the evidence regarding the effects of Diabetes Conversation Maps™, an educational tool that engages diabetic patients in health self-management activities. METHODS: We conducted a systematic literature review of articles published since 2005 that evaluated the Maps™ since 2005 using five electronic databases, and the reference lists of relevant papers. Non-English languages, non-human studies, and studies that included a description of the Maps™ were excluded. A quality assessment of relevant studies was performed. Outcomes were grouped into: objective (e.g., HbA1c levels), subjective (e.g., self-efficacy), and health behaviors (e.g., medication adherence). RESULTS: Of 612 papers originally identified, 13 were included in the final sample. The overall methodological quality of the
PD816
THE ROLE OF EDUCATION IN THE MANAGEMENT OF TYPE 1 DIABETES MELLITUS IN ENGLAND
Thibaut CA1, Bridges T, Vass G, Stewart G2, Kose1 J
1Costello Medical, Cambridge, UK; 2Costello Medical Consulting Ltd, Cambridge, UK
OBJECTIVES: Type 1 diabetes (T1DM) affects approximately 400,000 people in the UK, amounting to £1.8 billion in direct healthcare costs in 2012. Statistics from 2012/13 national diabetes audit (NDA) suggest that 52.4% of T1DM patients in England fail to achieve target haemoglobin A1c (HbA1c) levels (<48 mmol/mol [6.5%]). Current NICE draft guidance recognises the importance of education on glycaemic control; recommending courses for all T1DM patients within one year of diagnosis. However, only 4.1% of newly-diagnosed diabetics are offered structured courses such as the Dose Adjustment for Normal Eating (DAFNE). We sought to determine the relationship between educational course availability and uptake, and diabetics' HbA1c achievement. METHODS: Educational course attendance data, and HbA1c results for T1DM patients was extracted from the 2012/13 NDA for 9 regions in England, and DAFNE centre location records for 2014 were obtained. We explored the relationship between educational course uptake and optimal HbA1c achievement in newly-diagnosed patients, and also the number of DAFNE centres against overall T1DM HbA1c achievement. RESULTS: Newly-diagnosed T1DM patients were more likely to achieve non-restricted HbA1c by the end of the first year of diagnosis. However, no association was found between education course uptake or the number of DAFNE centres per region, and optimal HbA1c achievement in newly-diagnosed patients. A weak positive correlation was found between the number of DAFNE locations per region and proportion of the overall T1DM population achieving optimal HbA1c (R2 = 0.3). CONCLUSIONS: Educational courses may help T1DM patients achieve better glycaemic control. However, uptake for courses is below current NICE draft recommendations. Increasing uptake for such courses could help improve target HbA1c achievement in the long-term, whilst also providing a societal benefit through cost savings. Examining potential socio-economic factors and their impact on course uptake could be investigated. More research is required into educational course uptake in the overall T1DM population.

PD817
DIABETES IN TURKEY: ANALYSIS OF PATIENT CHARACTERISTICS
Demir C, Gursoy K, Koselerli R, Ozturk Y, Suzen A
Turkish Social Security Institution, Ankara, Turkey
OBJECTIVES: As the number of people with diabetes grows worldwide, it becomes a challenging problem for public health budgets. The objective of this study is to investigate and analyze the main characteristics of diabetes in Turkey. METHODS: Claims data from Turkish Social Security Institution were collected for the diagnosed patients 2010-2013. The study included 2,467,853 diabetes dependents (IDD) and 5,721,482 diabetes dependents depending on other diseases dependent (HBA1) between 2010 and 2014. Prevalence, incidence, age and gender distribution, and mortality figures were aggregated and analyzed in order to show how the disease is evolving in Turkey. RESULTS: The number of patients diagnosed with diabetes increased from 2010 to 2014 and totaled 3.1 million, nearly 85% with NIDD and 15% were females. On average, 645,000 new patients were added yearly. The incidence of diabetes dropped from 0.94% to 0.76% in 2010-2014, where IDD and NIDD were 0.06% and 0.71% in 2014 respectively While the share of NIDD patients represented 81% in 2010, the figure hiked 90% in 2014. When it comes to age distribution, 46-64 age group received the largest share (48%) among patients, followed by 25-45 and 65+ age groups, all three constituting nearly 96%. The average age of first diagnosis for male and female were 56.8 and 59.4 respectively, signaling that the disease is later diagnosed compared to other countries. In addition, 21% of females and 14% of males died over four-year time and average age of death was nearly the same in both diabetes types. CONCLUSIONS: Despite the decline in the incidence, diabetes epidemic is expected to grow in the future with lower mortality rates. Late diagnosis of diabet- es seems to be the most important problem in Turkey. Then, immediate action is needed not only by healthcare system but also by monitoring and public education programs to reach out patients earlier.

PD818
THE IMPACT OF HEALTHCARE POLICY BASED ON DRUG PLAN PERSPECTIVE VERSUS THE MINISTRY OF HEALTH PERSPECTIVE: A CASE STUDY OF THE ODPRN RECOMMENDATIONS OF RESTRICTING REIMBURSEMENT OF TESTOSTERONE REPLACEMENT THERAPY FOR HYPOGONADISM IN ONTARIO, CANADA
Habert BM1, Karelis A1, Stutz M2, Grober E, Greenberg D3, Sampalis JS4
1JSS Medical Research,Seniors, QC, Canada; 2Montreal Sinai Hospital, Toronto, ON, Canada; 3Saint Joseph Health Center, Toronto, ON, Canada; 4JSS Medical Research Inc., St. Laurent, QC, Canada
OBJECTIVES: The Ontario Drug Policy Research Network (ODPRN) published recom- mendations to restrict reimbursement and coverage criteria of testosterone replace- ment therapy (TRT) in Ontario. The ODPRN's budget impact analysis (BIA) evaluated, no reimbursement change (option A), restricting coverage of all forms of TRT (option B), restricting oral and topical forms only (option C), restricting topical forms only (option D). The analysis assumed exponential growth of TRT expenditures and inappropriate use in 7%-46% of patients. The analysis was limited to drug prescription costs as affected by the recommendations, resulting in forecasted savings ranging from $7-$16 million over a 3-year period. JSS Medical Research performed the BIA from the ministry of health perspective. METHODS: Our hybrid epidemiological and claims-based BIA included costs of TRTs and key cost drivers including inpatient, outpatient, testosterone level testing and Exceptional Access Program evaluation and processing. Ontario pre- scriptio- n drug expenditures based on claims data, as well as published literature on expert opinion were utilized. We evaluated the impact of the ODPRN scenarios with and without inappropriate TRT use over a 3-year period. RESULTS: Based on the ODPRN assumptions of all patients qualifying for TRT and taking into consideration key cost drivers, option B would cost $1.01 million, option C $766,000, and option D $557,000. Sensitivity analyses of ODPRN assumptions of inappropriate use, JSS forecasted savings of $373,000-$13 4 million as opposed to savings of $7-$16 million forecasted by the ODPRN. CONCLUSIONS: ODPRN savings exclude key cost drivers and assume a greater impact. The burden of the policy change would completely offset savings and generate costs of up to $1 million to the healthcare budget. Healthcare policy recommendations based on drug costs alone underestimate the true cost, shifting and in this case creating additional costs to other areas of the healthcare system.

PD819
DO ACCESS RESTRICTIONS ALWAYS IMPLY COST REDUCTION? CASE OF TURKISH DPP4 MARKET IN TREATMENT OF TYPE II DIABETES
Erdogan Cifci E1, Delkuyucu O2, Saylan M1, Keskinaslan A1
1Norvatis AG, Istanbul, Turkey; 2Norvatis AG, Istanbul, Turkey
OBJECTIVES: Type II diabetes mellitus (T2DM) affects approximately 400,000 people in Turkey. The treatment of type II diabetes mellitus using Dipeptidyl Peptidase 4 inhibitors (DPP-4i) has become increasingly popular in recent years in Turkey due to their low cognitive and renal toxicity compared to metformin. This study aimed at evaluating the cost implications of DPP-4i treatment in Turkey, a country with a large diabetes population. METHODS: A hybrid microsimulation/Markov model was developed to evaluate and compare the costs of DPP-4i (Sitagliptin) treatment to metformin as a second line therapy in type II diabetes patients in Turkey. The model used a 3-year time horizon, the average age of death was nearly the same in both diabetes types, and the model was run using 1,000 Monte Carlo simulations. Results of the cost-effectiveness analysis were compared to the results of the recently published cost-effectiveness analysis of DPP-4i treatment in Turkey. RESULTS: The findings of our study were similar to the results of the previously published study; however, no association was found between education course uptake or the number of DAFNE centres per region, and optimal HbA1c achievement in newly-diagnosed patients. A weak positive correlation was found between the number of DAFNE locations per region and proportion of the overall T1DM population achieving optimal HbA1c (R2 = 0.3). CONCLUSIONS: Educational courses may help T1DM patients achieve better glycaemic control. However, uptake for courses is below current NICE draft recommendations. Increasing uptake for such courses could help improve target HbA1c achievement in the long-term, whilst also providing a societal benefit through cost savings. Examining potential socio-economic factors and their impact on course uptake could be investigated. More research is required into educational course uptake in the overall T1DM population.

PD820
DO FREE MEDICATIONS IMPROVE OBSERVANCE AMONG DIABETIC PATIENTS?
Brian D Lachaine J, Abouanour M3, Labaire-Stall A, Tambwé E1
1University of Montreal, Montreal, QC, Canada; 2McGill University, Montreal, QC, Canada
OBJECTIVES: Diabetes is a chronic condition for which effective medications must be taken continuously (i.e. patient must be observant). Current health policies intro- ducing free drugs may reduce, at minimum, the cost of medication. However, there is little evidence that providing free medications improves diabetic patient observance. Taking advan- tage of a change in Quebec (Canada) policy the objective of this study was to assess whether the return to free medications (RfM) improved diabetic patient observance. METHODS: This study used a pretest-posttest design: drug use by diabetic patients in the 3 years prior to RfM was compared to their drug use in the 2 years following RfM. Data came from the Quebec public drug plan (QDP); for three groups: social welfare recipients, elderly receiving full guaranteed revenue supplement (GRS) and those receiving partial GRS. Data on oral antidiabetic drug consumption were obtained for a random sample of patients that were covered by the QDP during the full five year period (N total = 3308). Two indicators of observance were measured; whether a patient was using antidiabetic drugs at least 80% of the days and the proportion of days where antidiabetic drugs were used. These were measured both for the 12 months prior to the first prescription prior to RfM and after RfM and for the whole pre-RfM and post-RfM periods. To compare pre and post RfM data, we used Chi-square test for the first indicator and t-test for the second indicator. RESULTS: The proportion of patients who were observant was significantly (p<0.001) higher after RfM compared to before RfM, both for 12 months (87.9% vs. 82.8%) and the whole period (85.3% vs. 83.7%). The proportion of days where antidiabetic drugs were used also was significantly higher (92.3% vs. 89.5%, 90.8% vs 86.6%). CONCLUSIONS: Providing free medications to diabetic patients raised their observance and may have improved patient outcomes.

PD821
QUANTIFYING THE EFfICACY-EFFECTIVENESS GAP USING THE EXAMPLE OF METFORMIN
Jager A1, Amier N2, Bierbaum M3, Schoflitz O1
1Friedrich-Alexander-Universität Erlangen-Nürnberg, Nürnberg, Germany; 2Hochschule Aalen – Technik und Wirtschaft, Aalen, Germany
OBJECTIVES: According to the literature, there is a gap between the results of clinical trials (efficacy) and the effects of the same intervention in real-life (effectiveness). Although this so-called “efficacy-effectiveness gap” is often mentioned in