

41 841 (-EUR 1 518) per one patient. The total average cost per one type-2-diabetes patient was CZK 55 956 (-EUR 2.031) in 2014. **CONCLUSIONS:** Our data indicate that the cost of type 2 diabetes mellitus was CZK 55 956 (-EUR 2 031). A longitudinal study is, however, required to confirm the development of the average patient cost and take account of the cost of complications.

PDB38

COST OF ILLNESS ANALYSIS IN PATIENTS WITH DIABETIC FOOT SYNDROME IN HEALTH CARE OF REPUBLIC OF BELARUS

Kozhanova I¹, Romanova I¹, Gavrilenko L¹, Sachek M², Shepelkevich A¹, Artsiomenka A¹, Balabkova A¹, Shybyko K¹

¹BSMU, Minsk, Belarus, ²The Republican Scientific and Practical Center for Medical Technologies, Informatization, Administration and Management of Health (RSPC MT), Minsk, Belarus

OBJECTIVES: diabetic foot syndrome (DFS) is expensive complication of diabetes leading to disability. There are costly innovative drugs that can make complications more curable. It is necessary to obtain evidences of new technologies economic benefits. The aim of the study was to determine the economic burden of DFS in health care of the Republic of Belarus. **METHODS:** "cost of illness" analysis for outpatient and inpatient treatment of DFS patients has been performed. A retrospective study of treatment of 15 outpatients with diabetic ulcers and 16 inpatients who underwent amputation of different levels has been made. Direct and indirect costs were estimated. Average, minimal, maximal costs were calculated. All costs are given in euros (may, 2015). **RESULTS:** out-patient direct medical costs are 259 (78 to 636) per patient/year. Indirect costs are 1941 (from 1022 to 4357) per patient/year. The cost of "big" amputation is 5248 (from 647 to 13,556) per hospitalization and 1099 (from 282 to 3702 euros) for "small" amputations. Indirect costs range from 352 to 978 during the period of treatment. **CONCLUSIONS:** Amputation usually considered as emergency aid in the case of DFS makes significant financial burden for hospitals and health care system. Careful assessment of cost of illness of diabetes and it's complications allows to expand opportunities of expansive outpatient medical technologies use.

PDB39

COST OF TYPE 2 DIABETES ACCORDING TO GLUCOSE-LOWERING MEDICATIONS IN FRANCE

Charbonnel B¹, Dallongeville J², Simon D³, Bureau I⁴, Leproust S⁵, Levy-Bachelot L⁵, Gourmelin J⁶, Detournay B⁷

¹University of Nantes, Nantes, France, ²Pasteur Institute, Lille, France, ³Pitie Hospital, Paris, France, ⁴Cemka-Eval, Bourg la Reine, France, ⁵MSD France, COURBEVOIE, France, ⁶UMS 011 - Inserm - UVSQ, Villejuif, France, ⁷Cemka-Eval, Bourg-la-Reine, France

OBJECTIVES: With the introduction and delisting of some glucose-lowering medications, pharmacological treatments in T2D have changed in the recent years and details of the current drug use patterns are not known. This descriptive study aims to describe characteristics of patients with type 2 diabetes and patterns of use of antihyperglycemic agents in France in 2013. **METHODS:** A random sample of ~ 600,000 patients registered in the French national health insurances reimbursement database was used. Patients with diabetes were identified through their use of glucose-lowering medication and coding of hospital stays and long-standing condition insurance coverage in the database. Drug utilization pattern of antihyperglycemic agents were estimated considering prescriptions in Q4 2013 and compared to data from Q4 2007. **RESULTS:** Overall 28,708 patients with T2D (estimated database prevalence 4.5%, 8.8% in people aged 40 and over) were identified in 2013. Mean age was 67.5 (SD 12.9), 54.1% were male. In Q4, 41.2% of T2D pharmacologically treated patients received a monotherapy, 25.6% a dual therapy, 13.7% a multi-therapy and 19.5% an insulin therapy with or without other hypoglycemic agents. Compared to 2007 data, a slight but significant increasing trend toward combination therapies and insulin was observed. The use of metformin increased over time especially in monotherapy (66% among monotherapy in 2013 versus 50% in 2007). All thiazolidinediones and some sulfonylureas treatments were replaced by DPP-4 inhibitors and to a much lesser extent with GLP-1 analogues. **CONCLUSIONS:** Antihyperglycemic prescription patterns in France have changed in recent years in parallel with the introduction of different classes of medications to the marketplace but probably also in an attempt to improve glycemic control of patients. Knowledge of real life pattern of drug utilization remains an important dimension to better understand therapeutic needs in T2D management.

PDB40

HOSPITALIZATION COST AND LENGTH OF STAY ASSOCIATED WITH OPHTHALMOLOGICAL SURGERY DEPENDING ON THE DIABETIC STATUS

Chevalier P, Lamotte M

IMS Health, Vilvoorde, Belgium

OBJECTIVES: Ophthalmological complications (glaucoma, retinopathy, cataract) are frequent in patients with type I or type II diabetes and often require surgical treatment. This study aimed at assessing the impact of diabetes on the hospitalization costs and the length of stay associated with these surgical treatments in Belgium, using retrospective data. **METHODS:** The average hospitalization cost and the average length of stay (LOS) among patients hospitalized for ophthalmological surgery were estimated using the longitudinal IMS Hospital Disease Database (year 2013), including data (diagnoses, procedures, costs) on 24% of Belgian hospital beds. Stays were searched based on ICD-9-CM procedure codes corresponding to surgery for glaucoma (12.1 to 12.7), vitrectomy (14.71-14.74) and cataract extraction (13.19, 13.6). Patients were identified as diabetic if at least one diagnostic of diabetes (ICD-9-CM: 249-250) had been documented during the calendar year. The impact of diabetes on LOS/ cost was assessed through Wilcoxon non-parametrical tests. **RESULTS:** 671 stays with surgery for glaucoma, 1,438 stays with vitrectomy and 204 stays with cataract extraction were retrieved in the database (with diabetic patients accounting for 56, 202 and 24 of these stays respectively). Patients with Type I diabetes (n=16, split between glaucoma surgery and vitrectomy) were significantly younger than

Type 2 diabetes or non-diabetic patients (50.3 years, vs. 69.5 and 66.6 years respectively) at the time of surgery. The average cost of diabetic patients (both types) was more than twice the cost of non-diabetics in both glaucoma surgery (€7,972 vs. €3,278; p<0.001) and cataract extractions (€10,668 vs. €3,935; p=0.031) and about 30% higher in vitrectomies (€3,755 vs. €2,869; p<0.001). LOS was also systematically higher in diabetic patients (glaucoma surgery: 5.8 vs. 2.4 days; vitrectomy: 2.3 vs. 1.7 days; cataract extraction: 14.7 vs. 3.0 days). **CONCLUSIONS:** The presence of diabetes increases dramatically both LOS and hospitalization costs in patients undergoing ophthalmological surgery.

PDB41

PRODUCTIVITY LOSS COSTS ATTRIBUTABLE TO OBESITY IN WORKING PATIENTS WITH DIABETES IN THE US

Lee S, Choi I, Chang C, Suh D

Chung-Ang University, Seoul, South Korea

OBJECTIVES: To estimate annual productivity loss costs attributable to having obesity in working US adults with diabetes. **METHODS:** This study applied a cross-sectional design using the 2003-2012 Medical Expenditure Panel Survey (MEPS) data. Asthma patients (18-64 years old) were self-reported, had a Clinical Classification Codes of 0049, 050, or ICD-9-CM code of 250. To investigate the impact of having obesity, patients were classified as normal-weight (18.5≤BMI<25), overweight (25≤BMI<30), and obese (BMI≥30). Productivity loss costs, which were measured based on missed work days due to illness or injury for one year and the hourly wage, were estimated using a two-part model to adjust for patients with zero costs. To estimate the productivity loss costs attributable to having obesity, each group of costs was estimated by assuming everybody to be obese; these costs were then re-estimated by assuming everybody was normal weight, and the mean difference between the two estimated costs was calculated. All costs were converted to 2013 US dollars using the Consumer Price Index. **RESULTS:** Among a total of 6,992 working adults with diabetes, the prevalence of normal-weight was 12.9%, overweight 30.1%, and obese 57.0%. Annual average productivity loss costs for normal-weight and obesity in diabetes patients were \$471(95%CI:\$354-\$588) and \$585(95%CI:\$523-\$647) per patient, respectively. Among patients with diabetes who had loss of productivity costs, those with obesity had 1.02 times greater productivity loss costs than normal-weight patients after adjusting for patients' demographic and clinical characteristics. The adjusted productivity loss costs attributable to having obesity in working diabetes patients was estimated at \$77(95%CI:\$76-\$78) per patient per year. **CONCLUSIONS:** The loss of productivity costs among US diabetes patients is substantial, which is amplified by the presence of obesity. This study highlights the importance of obesity control in order to reduce costs and enhance productivity in patients with diabetes.

PDB42

LONGITUDINAL CHANGES IN MEDICAL SERVICES COSTS FROM 2006 TO 2012 FOR NEWLY DIAGNOSED T2D PATIENTS

Weng W, Liang Y, Kimball E, Hobbs T, Kong S, Sakurada B, Bouchard J

Novo Nordisk, Inc., Plainsboro, NJ, USA

OBJECTIVES: Changes in healthcare resource utilization by Type 2 diabetes (T2D) patients over time are important for understanding the effects that treatment paradigms may have on costs of disease. This study was a longitudinal assessment of real-world claims data which followed changes in treatment costs for a single cohort (N=35017) of newly diagnosed T2D patients. **METHODS:** The Truven Health MarketScan® Database was examined for claims data from US-based T2D patients. Inclusion criteria were: at least 2 diagnoses according to ICD-9 codes for T2D, or 1 T2D diagnosis plus 1 or more OAD claims, and allowing 1 possible misdiagnosis for type 1 diabetes, ≥18 years of age, continuous enrolment starting from 2006 (index year) to 2012 in a plan with prescription benefits, and at least 1 prescription for any anti-diabetic drug. All-cause costs of inpatient and outpatient services, medications, and supplies were analyzed. **RESULTS:** From 2006-2012, total annual costs/patient increased from \$9,817 to \$12,551, adjusted to 2012 levels. Costs for outpatient services grew 33% (\$4,214-\$5,645/outpatient). Outpatient emergency room utilizer costs rose 40% (\$1,846-\$2,586/utilizer). Total inpatient costs rose 47% (\$19,453-\$28,526), followed by a 36% growth of inpatient emergency room costs (\$15,823-\$21,526). Inpatient costs/1-day stay rose from \$3,473 to \$4,322, and inpatient ER costs/1-day stay increased from \$2,776-\$3,261. From 2006-2012, mean total days/stay/inpatient remained stable between 5.6 to 6.0 days, indicating annually increasing costs for inpatient services. Overall annual drug costs/utilizer increased 14% (\$2,969-\$3,389), as did anti-diabetic drug costs/utilizer (81%; \$474-\$858). Between 2006-2012, diagnosed T2D-associated comorbidities increased as follows: cerebrovascular disease (13%-21%), peripheral vascular (3%-10%), nephropathy (3%-13%), and retinopathy (4%-14%). **CONCLUSIONS:** Costs for all types of resource utilization increased, ranging from 17% to 81%, mainly driven by increased inpatient costs. Population aging may partly be responsible for the increased comorbidities, thus accounting for some increased treatment costs, along with increased drug costs.

PDB43

COST OF ACHIEVING COMBINED IMPROVEMENTS IN HBA1C AND WEIGHT WITHOUT HYPOGLYCAEMIA OVER 4 YEARS IN A POST-HOC ANALYSIS OF DAPAGLIFLOZIN + MET VS GLIPIZIDE + MET

Johansen P¹, Mukherjee J², Sörstadius E³, Sternhufvud C³

¹The Swedish Institute for Health Economics (IHE), Lund, Sweden, ²Bristol Myers Squibb,

Wallingford, CT, USA, ³AstraZeneca, Mölndal, Sweden

OBJECTIVES: The SGLT2 inhibitor dapagliflozin (DAPA) increases glucosuria in an insulin-independent manner resulting in reductions in hyperglycemia, weight and BP with a low risk of hypoglycemia. Glipizide (GLIP) reduces hyperglycemia by increasing beta cell insulin secretion with risk of hypoglycaemia and weight gain. We conducted a cost analysis of treating patients over 4 years to two relevant composite endpoints: (1) HbA1c lowering of ≤0.5%, no major or minor hypoglycaemic events and weight loss ≥3% and (2) HbA1c lowering of ≤0.5%, no major or minor hypoglycaemic events and weight loss ≥5%. **METHODS:** The Cardiff Diabetes model