

trality and percentages determined. **RESULTS:** The data reveal a 100% written diagnosis for all prescriptions encountered. There were more females than males (70% vs 30%). The average number of drugs per prescription was 6.0. About 61% of the diabetic patients were also diagnosed with hypertension. Biguanides (95%) were the commonest oral hypoglycaemic agent prescribed while calcium channel antagonist (60%) was the commonest antihypertensive prescribed. The average cost of medication per prescription was GHC 40.0 (Ghana cedi) – approx \$20.5 (USD), were as the average total cost of drugs per patient for the entire year was GHC 235.2 (Ghana cedi) – approx \$120 (USD) **CONCLUSIONS:** The study demonstrates that most patients attending the diabetic clinic in Ho Municipal Hospital are females. The cost of diabetic medications to patient per prescription was expectedly high, particularly due to the high number of drugs prescribed. Most diabetic patients have hypertension. The prescription of ACE-I therefore need to be improved to reduce the rate of cardiovascular complication in diabetes.

## PDB31

#### THE RELATIONSHIP BETWEEN THE COST OF DISEASE AND THE PRESENCE OF OPHTHALMIC COMPLICATIONS IN TYPE 2 DIABETES MELLITUS IS DETERMINED VIA THE CONCOMITANT COMPLICATIONS OTHER THAN OPHTHALMIC COMPLICATIONS

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**OBJECTIVES:** An update of health economics analysis of type 2 diabetes mellitus (T2DM) in adult population in Turkey was performed. The relationship between the presence of ophthalmic complications and cost components is reported in this presentation. **METHODS:** Forty centres were selected from the list of centres in which adult T2DM patients were followed on a routine basis. These centres were representative of the country, since they were selected by two-stage cluster sampling. Medical files were reviewed for two to five years prior to the study. Item prices were obtained from the Ministry of Health and Social Security Organization of Turkey. Costs are calculated simply as the total of all frequency-price products (1€ = 2.321 Turkish Liras; Feb 2012). **RESULTS:** A total of 942 patients' data were included in the analysis. During the previous five years, 20.8% of the patients had at least one visit or hospital stay related with ophthalmic complications (incl. diabetic retinopathy, cataract, glaucoma). Total annual cost were 546.60€ and 382.13€ in patients with and without ophthalmic complications, respectively. Costs related to treatment, laboratory tests and health care services were 397.00€, 96.19€ and 53.41€ in patients with ophthalmic complications. These cost items, however, were quite similar in patients without ophthalmic complications and in patients with isolated ophthalmic complications, who has no systemic complication other than ophthalmic complication (for treatment 277.35€ vs. 297.07€, for laboratory tests 62.09€ vs. 85.82€, and for health care services 42.69€ vs. 40.27€). **CONCLUSIONS:** All components of cost increased by 25% to 55% with the presence of ophthalmic complications. But the costs were almost similar in patients without ophthalmic complications and with isolated ophthalmic complications. Thus, the increase in cost seems to be related with the presence of concomitant systemic complications other than ophthalmic complications alone.

## PDB32

#### DIABETIC FOOT SYNDROME HOSPITALIZATION COSTS IN POLAND

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**OBJECTIVES:** One of the main causes of premature death and disability in diabetic patients are amputations of lower limbs which are the result of the development of diabetic foot syndrome (DFS). Poland belongs to countries with a high rate of amputation. It is believed that the high rate of amputation is caused by significantly higher costs of DFS treatment compared to cost of amputation. Indeed, in Poland costs of DFS hospital treatment and amputation are almost equal. To answer the question whether the costs of DFS hospital treatment are overestimated this study estimated diabetic foot syndrome hospitalization costs based on data collected in the one of leading DFS treatment centers. **METHODS:** Data on hospitalization costs were estimated retrospectively, based on 2011 year disease documentation of all DFS patients treated in the Department of Gastroenterology and Metabolic Diseases of the Medical University of Warsaw. Values are presented in Euros (exchange rate: 1 EUR=4.20 PLN). **RESULTS:** Data on 37 patients were analyzed. Total cost of hospitalization per patient was estimated at the amount of 1765 EUR and was almost 2-times higher than National Health Funds (NHF) reimbursement cost of hospitalization. However, it should be noted that most of the costs were related to bed costs (76%) which we believe are overestimated. The second cost position was drug costs which accounted for only 11% of total costs. Other cost positions such as: bandage, laboratory tests, diagnostic procedures and specialized team help (i.e. anesthesia) amounted up to 4% of total cost. **CONCLUSIONS:** The reimbursement of diabetic foot syndrome treatment seems to be rather underestimated than overestimated. However we suppose cost data provided by the hospital department for calculation are overestimated on bed costs and underestimated at other positions especially on diagnostic procedures and bandage costs.

## PDB33

#### BURDEN OF DISEASE ATTRIBUTABLE TO CLINICAL AND SUBCLINICAL HYPOTHYROIDISM IN THE SPANISH POPULATION

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**OBJECTIVES:** Subclinical hypothyroidism (SH) is typically defined as asymptomatic, characterized by slightly increased serum thyrotropin (TSH) levels and normal serum free thyroxine concentrations. SH is common among general population, especially in middle-aged women most often after menopause, and it is related to cardiovascular events. The objective of this analysis was to estimate burden of disease of SH and its evolution to clinical hypothyroidism (CH) in Spain. **METHODS:** The recommended methodology by WHO for burden of disease studies was used in this analysis. Disability-adjusted life years (DALY), years of life lost (YLL), years life with disability (YLD) and mortality related to SH and CH were calculated based on the adjusted attributable fraction. Prevalence of risk factors in general population as well as HR, were obtained from literature review and official sources (CMBD, hospital mortality register). **RESULTS:** In Spain, the number of patients with SH and CH was estimated at 2,767,124. Among them, TSH concentrations ranged between 4.5-6.9 mUI/L in 1,949,820 patients; between 6.9-10 mUI/L in 539,988 patients and between 10-19.9 mUI/L in 278,317 patients. Every year, 12,608 cardiovascular events, 1,388 cardiac deaths and 30,550 DALY (13,124 YLL and 17,426 YLD) would be attributable to SH. SH represented between 1.6-7.3% of cardiovascular DALY. **CONCLUSIONS:** Both the extensive socioeconomic burden of SH and the risk of developing clinical hypothyroidism and subsequent cardiovascular health risks among patients with SH is to be considered. This suggests the utility of SH screening for patients with risk factors, after assessing the efficiency of screening techniques.

## PDB34

#### ECONOMIC EVALUATION OF TREATING DIABETES PATIENTS ACCORDING TO GUIDELINES IN SOUTH-WESTERN ONTARIO, CANADA

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**OBJECTIVES:** In spite of the fact that primary care physicians are recommended to following evidence-based clinical guidelines for management of diabetes, no studies have currently evaluated the clinical and economic impact of following diabetes guidelines in Ontario. **METHODS:** To assess the short- and long-term impact of treating patients with type II diabetes according to the guidelines in South-western Ontario, two cohorts of newly diagnosed cases in 2002 were used. The first group included patients who were not treated according to guidelines during the diagnostic year and the two years after diagnosis. The second group consisted with individuals who were not treated according to the guidelines only during the first year but for the two subsequent years of their diagnosis they were treated to achieve the specified targets for HbA1c, blood pressure and lipid levels according to guidelines. The short-term impacts of intervention in clinical outcomes were calculated and were used to extrapolate to 40 years horizon using the Ontario Diabetes Economic Model (ODEM). For each cohort, the event rates for seven diabetes-related complications, the mean difference in cost, and expected quality-adjusted life-years (QALYs) were calculated based on baseline risk and 3-years following the intervention. **RESULTS:** Almost 500 individuals newly diagnosed with diabetes in 2002 were not treated according to guidelines during the first year following diagnosis. Of those 236 were treated according to guidelines in the second and third year following diagnosis and 259 individuals were not (the control cohort). A small difference has been observed between the cohorts in terms of intermediate outcomes as well as the lifetime predicted cumulative costs, QALYs, life expectancy and event rate. **CONCLUSIONS:** The results of this study indicated that treating patients to guidelines as used by physicians did not make an impact on the short and long-term outcomes associated with diabetes.

## PDB35

#### EVALUATION OF THE LONG TERM ECONOMIC IMPACT OF IMPROVING HBA1C IN TYPE 2 DIABETES PATIENTS IN SAUDI ARABIA

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**OBJECTIVES:** Evidence from the A1chieve study (an international, prospective, observational study of insulin analogs within routine clinical practice) suggests the glycemic control in type 2 diabetes patients in Saudi Arabia is poor. The aim of the current analysis was to investigate the long-term clinical and economic benefits of a 1% reduction in HbA1c in comparison with baseline levels for type 2 diabetes patients in the Saudi Arabian setting. **METHODS:** Long-term projections were made using the published and validated CORE Diabetes Model, over a 35-year time horizon. Patient characteristics were taken from the Saudi Arabian cohort of the A1chieve study. At baseline, mean (SD) patient age was 51(11) years, duration of diabetes 10(6) years and HbA1c 9.8(0)%. Following a 1% HbA1c reduction in the active arm, HbA1c was kept constant. Captured costs included concomitant medications and diabetes-related complications. Costs of antihyperglycemic treatment and adverse events were not included. Future costs and clinical outcomes were discounted at a rate of 3% per annum. Costs are presented in 2011 Saudi Arabian Riyals (SAR) and converted into Euros (EUR) (SAR 1 to EUR 0.2043). **RESULTS:** Improved glycemic control was associated with improved life expectancy by 0.71 years (10.08 versus 9.37 years). Furthermore, reduction in HbA1c was associated with increased time free from diabetes-related complications. Direct costs were SAR 16,084 [EUR 3,286] lower in the reduced HbA1c group (SAR 173,514 [EUR 35,449] versus SAR 189,598 [EUR 38,735]). This was driven by savings resulting from the reduced incidence of complications. **CONCLUSIONS:** Baseline glycemic control in A1chieve type 2 diabetes patients in Saudi Arabia is sub-optimal. Improvements in