ical devices and pharmacy costs. Reimbursements for patients with declining renal function were estimated at €4,933 ± 568.9 for monotherapy, €4,521 ± 350.8 for dou-
ble therapy, €4,191 ± 467.9 for triple therapy, and €3,768 ± 1,106.2 for insulin therapy. **CONCLUSIONS:** Overall, ambulatory care costs increase with treatment escalation and declining renal function amongst T2DM patients. Insulin therapy is associated with substantial increased costs, related to pharmacy, nursing care and medical device utilization.

**PDB72 THE BURDEN OF HYPOGLYCAEMIA IN SECONDARY CARE IN ENGLAND**

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**OBJECTIVES:** Hypoglycaemia is a common adverse event associated with the manage-
ment 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 among patients with diabetes control. **RESULTS:** There were a total of 11,330 inpatient spells assigned an HRG for hypoglycaemia in 2009, an increase of 17.0% from 2006 when there were 9,682 inpatient spells. In 2006 the average inpatient length of stay was 5.7 days, but by 2009 this figure had risen by 21.8% to 6.9 days. In 2006 the cost of hypoglycaemia due to hospitalisation was £13.57 million. In 2009 this figure was £16.04 million, representing an 18.2% increase in cost. In 2009 the average inpatient cost 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-
nificant financial burden upon hospitalisation and evidence to date points to the need for changes in the constraints in the NHS, prescriber's should seek to use medications that reduce the risk of hospitalisation due to hypoglycaemia.

**PDB73 IMPACT OF EPIDEMIOLOGICAL AND ECONOMIC FACTORS ON INSULIN TOTAL SALES IN THE UK DIABETIC MARKET**

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**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 impact of the macro-economic and epidemiological variables 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 used yearly pooled, cross-sectional data from IDF and HES Forecasting Database at different time points to account for the variation in different variables. The total population was obtained from OECD. The prevalence and incidence rates were obtained from IDF for 2001, 2003, 2007 and 2010; average of previous year’s data-points were used for years in which no data was provided. The main independent variable was the total yearly prescription rate for insulin, calculated from data derived from intrinsic Patient Flow Model. **RESULTS:** A direct correlation was found between estimated total Rx for insulin and incidence of diabetes. The results can be summarized as: For every 1% rise in total estimated Rx for Insulin and incidence there is a 4% and 48% increase in insulin sales, respectively. **CONCLUSIONS:** Based on our model, total Rx plays a major role in determining the total sales for insulin. From a policy perspective, it will support UK government’s diabetes related initiatives focusing on effective cost management.

**PDB74 TITLE: IMPLEMENTATION OF DIABETES PROGRAMME BUDGET MARGINAL ANALYSIS (PBA) IN A PRIMARY CARE TRUST (PCT) LIM M1, ANDERSON PM2

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**OBJECTIVES:** To undertake resource re-allocation for improvements in service and patient outcomes within a diabetes programme using PBA. **METHODS:** UK National Health Service organisations have to manage severe budget pressures. If health outcomes for patients to be maintained and improved, resources must be (re)allocated efficiently and some disinvestment is inevitable. PBA is an ideal framework for these tasks as it is based on opportunity costs and maximisation of benefits. The pilot PBA exercise reported was undertaken in an English PCT in 2010. Data on the inputs and outputs of diabetes care received by patients was collected by a multidisciplinary group of commissioning healthcare staff and patient representatives. Through comparison of the data with other PCTs and a review of the literature concerning the effectiveness and cost-effectiveness of current and proposed interventions within the programme, the multidisci-
plinary group identified opportunities for resource reallocation. **RESULTS:** Comparisons, the PCT had near average spending but with poor HbA1c outcomes, use of glucose blood testing reagents was high - the third most costly prescribed item and of overall drug spending. Reducing unnecessary spending on these in type II dia-
betes patients focused resource on specialist nurses to patients in optimal diabetes control. **CONCLUSIONS:** Literature reporting successful implementation of PBA is uncommon and factors associated with success are setting, individuals leading the initiative and buy-in of participants to the process. In this exercise using detailed financial and outcomes data, implementing PBA and gaining buy-in from all stakeholders resulted in a successful disinvestment decision, resource reallocation and re-investment in diabetes services. The next important step is to use PBA to make a disinvestment decision alone and improve the process; reduc-

**PDB75 ANALYSIS OF THE MEDICINES PRICING PROCEDURE IN THE REPUBLIC OF MACEDONIA**

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**OBJECTIVES:** To analyze the development in the medicines pricing regulation in Republic of Macedonia during 2005 to 2010 and its impact on medicines affordability. **METHODS:** Regulatory analysis of the changes in the medicines prices regulation for the period 2005 to 2010. The affordability of the medicines to the population was explored before the after the new regulation introduction. Affordability was evaluated through the comparison of the cost of therapy of the most frequent diseases with the inhabitants wages. For comparison purposes, the average monthly wages in January 2005 (7,999,00 MKD) and in January 2010 (14,914,00 MKD) were used as announced by the UJP (Public Revenue Office of Macedonia). The unified medicines prices were established in 2007 based on ex-factory price, wholesale mark-ups and pharmacy mark-ups. The Health Insurance Fund carried out the supply of medicines on the Positive list by international tenders until 2005. The tender was tendered in 2007 and its objective was the Purchasing Power Parity. The statistical analysis of the cost of treatment for se-
lected health conditions compared with the average monthly wages, expressed as working hours shows that less working hours are needed to purchase medicines for all clinical conditions in 2010 compared to 2005. There is statistically significant difference in working hours needed to purchase medicines between 2010 and 2005 (Wilcoxon Matched Pairs Test: Z = 2.240, p = 0.025). The better financial affordability of medicines in 2010 is a result of partly lower medicines prices, but predominantly of higher nominal wages. **CONCLUSIONS:** The analysis revealed the positive impact of the medicines pricing and references on medicines affordability. The number of working hours needed to purchase a month of treatment decreased.
A short questionnaire about socio-demographic data, adherence (Moriyuki Medication Adherence Scale) and knowledge (Michigan Diabetes Knowledge Test) while medical records were reviewed for diabetes-related data. **RESULTS:** The mean age was 58.16 years (SD = 9.16) with around 50% males. The mean MMAS score of the patients was 6.11 (SD = 1.66) and the total mean score of MDKT was 7.44 (SD = 3.08). A significant positive correlation between MMAS and MDKT scores were found (r = 0.505, p < 0.001). Diabetes mellitus type 2 (T2DM) diagnosis and current pioglitazone dose (15 or 30 mg) with other oral antihyperglycaemic agents for ≥3 months. GPs provided clinical data for ≥1 patient on each pioglitazone dose. The 29 potential reasons for prescribing the current pioglitazone dose were classified into 4 categories: sufficient glycaemic control, poor tolerability and/or side effects associated with pioglitazone, comorbidity/polypharmacy, and patient-related factors. **RESULTS:** Of the 1456 patients provided by GPs, 739 were on pioglitazone 15 mg and 717 on 30 mg. Compared with the 30-mg group, patients in the 15-mg group had a shorter duration of T2DM (median 7.3 vs. 8.3 years) and the same median HbA1c level (7.2%). Collectively, reasons in the sufficient glycaemic control category were selected most for both groups; however, they were selected more often for 15 mg and 11% on 30 mg (p = 0.005). The correlation coefficient between HbA1c and total knowledge score was –0.39 (p < 0.001). Higher diabetes knowledge was a significant predictor of higher medication adherence (OR = 1.381, p < 0.001). **CONCLUSIONS:** Medication adherence is moderately related with diabetes knowledge and total knowledge score was –0.39 (p < 0.001). The correlation coefficient between HbA1c and total knowledge score was –0.39 (p < 0.001). Higher diabetes knowledge was a significant predictor of higher medication adherence (OR = 1.381, p < 0.001).