calculated by using the human capital approach. Costs were discounted at 5%. Annual and lifetime direct and indirect costs, in US dollars (USD), were determined on a per patient basis, and were then projected to the overall Colombian type-2 diabetes mellitus population. **RESULTS:** The estimated annual total cost of type 2 diabetes mellitus was $2.7 billion USD from the societal perspective. From the ministry of health perspective, the annual estimated cost was $921 million USD. The annual direct cost per patient was $288 USD, and the annual indirect cost per patient was $559 USD The distribution of this cost over the different model disease stages was as follows: diabetes treatment, 47%; cardiac and coronary disease, 24%; stroke, 15%; retinopathy, 2%, nephropathy 3%; and amputation, 9%. Macrovascular complications comprised 86% of the annual direct costs and 95% of the annual indirect costs of type 2 diabetes mellitus. **CONCLUSION:** The economic burden of type 2 diabetes mellitus in Columbia is comparable to results for other countries. The developed model showed a logical disease progression.

PDB39

IMPACT OF HBA1C IN TYPE 2 DIABETES MELLITUS IN MEXICO: SIMULATION ANALYSIS, A PHARMACOECONOMIC PERSPECTIVE

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OBJECTIVES: To analyze the clinical and economic impact of adequate control of glycosylated hemoglobin (HbA1c) over the chronic complications of Type-2 Diabetes mellitus. **METHODS:** A Monte Carlo simulation was performed termed Diabetes Mellitus Model (DMM), previously validated, and published. The influence parameter of DMM was (HbA1c) simulated for each patient. A temporary horizon of five years was set. The design compared two hypothetical groups of 1000 patients each, with identical parameters. Group one included patients not responding to conventional treatment with insulin, who initiated with a serum level of 9.1% of HbA1c the first year and remained at this value during the four following years. This HbA1c value corresponds to the average level seen in the Mexican population when initially treated (first level of attention). Group two included patients responding to intensive treatment with insulin, who initiated with 9.1% HbA1c and reached an average value of 7.5% HbA1c. The cost of complications was calculated through the estimation of the direct cost. **RESULTS:** There were 209.69 events in group one, and 160.44 events in group two, a difference of 43.65. There were 7.01 more hypoglycemic events in the group two. Group one had 17.01 more cases of clinical neuropathy, with an estimated cost of €1715.51 per/event. For diabetic foot syndrome there were 2.31 more in group one with a cost of €5180.35 annually. The model projected more cases of microalbuminuria, who without adequate treatment would progress to advanced renal disease, and 1.61 more events of advanced renal disease with an annual cost of €22,273.35. **CONCLUSION:** The model results justify prevention measures in the first level of attention emphasizing in the strict metabolic control to reduce the start of the micro-vascular damage of target organs; reducing the demand of hospitalization, labor incapacities and use of high-specialty medications which represent the highest costs of the health system.

PDB40

SIMULATION OF LONG-TERM COSTS OF COMPLICATIONS IN TYPE II DIABETES IN THE UNITED STATES

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OBJECTIVES: To estimate the impact of achieving the American Diabetes Association (ADA) goal for glycemic control (HbA1c < 7.0%) on long-term costs associated with managing the complications of Type II diabetes. The ADA also sets goals for blood pressure (systolic <130 mmHg and diastolic <80 mmHg), lipids (LDL-C < 100 mg/dL, HDL-C > 40 mg/dL men, 50 mg/dL women, triglycerides <150 mg/dL). There is evidence many do not achieve these targets, and have sub-optimal control of cardiovascular risk factors. **METHODS:** A discrete event simulation of the long-term economic impact of complications (cardiovascular and microvascular) for patients with Type II diabetes was developed. Model parameters and risk functions for complications were based on the UKPDS, Saskatchewan health database analyses, and literature. A cohort is created by reading in profiles including age (mean 59.3 years), gender (57% male), blood pressure (mean SBP 132 mmHg), and lipids (mean total cholesterols 5.32 mmol/L) extracted from patients with Type II diabetes diagnosed for less than 5 years in NHANES 2001–2002. Two cohorts were simulated with HbA1c less than and above 7%. One hundred replications of 1000 patients were run over 20 years. Direct medical costs reported in 2004USD ($) include hospital admission, outpatient, and routine care. **RESULTS:** The average cost per patient who were above goal (mean baseline HbA1c 9%) over 20 years was predicted at $38,137 compared to $26,882 for patients at goal (mean baseline HbA1c 6%). Complication rates were lower in patients at goal: 29% fewer cardiovascular and 36% fewer microvascular complications. Average life expectancy was 13.49 years, 0.44 years longer than those not at goal. Although over the first 10 years, cardiovascular related costs were majority of the total costs accrued, microvascular complications developed later in the course of diabetes and their costs became majority over 20 years. **CONCLUSION:** Patients achieving the recommended glycemic goals are expected to substantially decrease complication costs and complications rates.

PDB41

INSULIN AND INSULIN ANCILLARY USAGE, THE ANNUAL COST OF TREATING TYPE 2 DIABETES WITH INSULIN IN THE UNITED KINGDOM

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OBJECTIVES: To quantify the true cost of insulin prescribing in type 2 diabetes (T2D) including insulin and insulin ancillary items. Few data on annual insulin cost exist. Insulin is difficult to cost due to the array of insulins, wide dosing ranges, prn usage following self testing and usage of insulin ancillaries e.g. lancets, needles and testing strips. **METHODS:** Prescribing data were collected from a longitudinal real patient database (the IMS UK Disease Analyzer database) showing prescribing data of 650 GPs within 130 practices across the UK providing access to 95 m prescriptions. Costs were then assigned to the data. The population was existing T2D patients with incidence of insulin usage, defined as those patients: Prescribed insulin with a prescription for any oral antidiabetic drug prior to insulin and aged >40 y at first record of diabetes; With Read code of T2D (could include patients <40 y); additionally incident on insulin after January 1, 2002. Costs of insulin prescriptions and ancillaries were drawn

from the database sourced from the UK drug tariff, BNF and MIMS (with appropriate assumptions where quantities were unclear). **RESULTS:** In total, 3581 patients met the inclusion criteria. The average dose of insulin in T2D patients within the study was 36IU/day at 12 months. The average yearly cost was ≤384 for insulin alone and ancillary item cost reached ≤223 increasing total annual cost of insulin and equipment to ≤607. **CONCLUSION:** Although clinically appropriate for some T2D patients, insulin is expensive, particularly when ancillaries are considered.This database study was a straightforward way of identifying and analysing not only drug costs but 'hidden' costs of insulin ancillaries.This analysis only takes account of insulin and ancillary costs and does not account for visits to health care professionals. Initiation of insulin is often accompanied by extra visits to health care professionals, which would further increase costs.

PDB42

COSTS ASSOCIATED WITH THE FIRST SIX MONTHS OF INSULIN THERAPY IN PATIENTS WITH TYPE 2 DIABETES IN GERMANY AND THE UNITED KINGDOM: DATA FROM THE INSTIGATE STUDY

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OBJECTIVES: The primary objective of the INSTIGATE study is to assess the direct costs of care for type 2 diabetes in the 6 months before and after insulin initiation. This abstract presents data for patients enrolled in Germany and UK. **METHODS:** INSTIGATE is an ongoing prospective European observational study investigating patients with type 2 diabetes who have initiated insulin during usual care. The direct costs of diabetes care over the 6 months prior to and after insulin initiation were calculated by collecting data on individual resource use and assigning local unit costs. Data collected included; number of consultations with health care professionals, details of oral antidiabetic medications and insulins, hospitalisations for diabetes care or complications, and frequency of blood glucose monitoring. **RESULTS:** Five hundred and nine patients were enrolled in Germany and UK, and 6 month follow-up data was collected from 457 patients. In Germany the median costs per patient for diabetes care in the 6 months prior to and after insulin initiation were 406€ and 893€ respectively. In the UK the median costs per patient for diabetes care in the 6 months prior to and after insulin initiation were 596€ and 707€ respectively (2006 costs). **CONCLUSION:** For German and UK patients included in this study the median cost of care for diabetes in the 6 months following insulin initiation is higher than in the 6 months prior to insulin initiation. Differences in types of resource use pre and post insulin initiation have been observed and further analysis is underway to investigate how these differences, and the cost of insulin, are impacting costs of care. Outcomes following insulin initiation will also be investigated.

PDB43

COMPARATIVE STUDY OF ANNUAL TREATMENT COSTS OF GLARGINE INSULIN AND DETEMIR INSULIN IN PATIENTS WITH TYPE 2 DIABETES MELLITUS IN SPAIN

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OBJECTIVES: In Spain there are several pharmaceutical products for the treatment of type 2 diabetes mellitus (DM2), with different profiles which implies alternative patterns of administration. A comparative study comparing annual costs linked to the treatment with Glargine insulin (GI) and Detemir insulin (DI) has been performed with the Spanish National Health System perspective. **METHODS:** Clinical data related with each treatment derives, mainly, from a study performed by Rosenstock et.al (2006): a 52-week open-label, parallel, multinational trial, which compares efficacy and safety of GI and DI. This trial has shown that patients treated with GI required less dairy dose of insulin and suffer from less severe hypoglycaemia than those patients treated with DI. Data about other use of related medical resources (consumption of needles and blood glucose tests, and management of major hypoglycaemic episodes) has been obtained from Spanish published literature. Costs calculations refer to year 2007 and have been derived from Spanish databases and published tariffs. **RESULTS:** Patients treated with ID require 65% more dose than those treated with GI, and suffer more major hypoglycaemic events. In patients with DM2 management with GI has lower total costs than DI, which allows savings up to 534.96€ per patient-year. Savings are related with costs of total insulin, needles and blood glucose tests and also medical management required in case of major hypoglycaemic events. **CONCLUSION:** For patients with DM2 treatment with GI is an efficacious and safe therapeutic option compared with DI, because GI is associated with lower annual total costs, and allows saving up to 534.96€ per patient-year i.e. a 34% saving per patient-year.

PDB44

INPATIENT COSTS AND HEALTH OUTCOMES FOR PREGNANT WOMEN WITH TYPE 1 DIABETES

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OBJECTIVES: Pregnant women with diabetes report high rates of neonatal mortality and morbidity. The costs of resulting interventions are potentially substantial. This study investigated health outcomes and inpatient costs in pregnant women with type 1 diabetes. **METHODS:** This analysis utilised a cohort of 302 pregnant women with type 1 diabetes, enrolled before 10 weeks gestation, with $HbA_{1C} \leq 8\%$ at confirmation of pregnancy and for whom birth outcome was known. Subjects were participating in a randomised study of basal-bolus insulin regimens, with doses titrated in line with the American Diabetes Association (ADA) guidelines. Outcomes recorded included major maternal hypoglycaemia, neonatal hypoglycaemia, obstetric complications, congenital malformations, foetal loss, birth before 37 weeks gestation, birth weight >4000 g, and other adverse events if life threatening or requiring hospitalisation. Resulting inpatient costs were estimated from the perspective of the UK National Health Service. **RESULTS:** The percentage of subjects reporting major maternal hypoglycaemia was 29%,