OBJECTIVES: As Type 2 Diabetes (T2D) progresses oral hypoglycaemic agents (OHAs) alone fail to maintain blood glucose control and insulin is required. LAPTOP was a randomized, non-inferiority trial comparing the daily insulin glargine (IG, Lantus Solostar) to glimepiride and metformin with twice daily 30% regulatory 70% human NPH insulin (Actraphane 30) without any additional OHAs in 371 T2D patients over a 24 week period. IG plus OHAs was significantly more effective in lowering HbA1c (1.64% vs. 1.31%). A cost minimization analysis was undertaken using LAPTOP data to compare the costs of the 2 regimens. METHODS: The analysis was undertaken from a UK NHS perspective with prices from MIMS November 2010. Cost estimates were based on the use of non-proprietary OHAs and IG and biphasic insulin aspart (BIA, NovoMix 30 FlexPen) prefilled disposable injection devices. It was assumed a new needle, lancet and blood glucose test strip were used for each injection with a 2U priming dose of insulin before each injection. RESULTS: Costs were calculated over the 24 week study period. The total cost of drugs per patient on glimepiride was $617 with $167 for IG and BIA $28.2U and BIA $64.5U. The cost of needles, lancets and test strips was much lower for IG plus OHAs at $76 compared with $152 for the BIA group. Overall the cost per patient for 24 weeks for the IG plus OHAs group was $266 compared with $319 for BIA, a difference of 17%. Sensitivity analyses replacing disposable with reusable pens and BIA by other biphasic insulins gave similar results to the base case. CONCLUSIONS: In comparison with biphasic insulin the cost of IG plus OHAs was 35% less to achieve an equivalent reduction in HbA1c.

PDB23
THE IMPACT OF TREATMENT MODIFICATION ON HEALTHCARE EXPENDITURE IN PATIENTS WITH TYPE 2 DIABETES INITIATING EXENATIDE BID OR INSULIN GLARGINE
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OBJECTIVES: To examine the impact of treatment modifications on healthcare expenditure for patients with type 2 diabetes (T2D) initiating exenatide BID (exenatide; or insulin glargine. METHODS: A retrospective database analysis compared 2 cohorts of patients with T2D who initiated exenatide (N=9197) or insulin glargine (N=4499) between 10/01/2006 and 03/31/2008 with 12 months pre- and 18 months post-index continuous enrollment. The 2 cohorts were 1:1 propensity score matched on baseline demographics, clinical, and resource utilization variables. RESULTS: The likelihood of treatment modification and mean total healthcare expenditure varied for patients intensified their therapy also had significantly lower expenditure of $2472 (p<0.0001). There were no significant differences in expenditure for patients who switched or discontinued their therapy. CONCLUSIONS: The likelihood of treatment modification and mean total healthcare expenditure varied for patients on exenatide or glargine in real-world settings. Exenatide-treated patients had significantly lower expenditure of $1546 (p=0.0001). After adjusting for covariates, the cost decrease associated with RG+S+MET remained statistically significant (cost difference=-$1,248; cost ratio=0.87; P=0.0120). Diabetes-related adjusted incremental cost saving of RG+S+MET over STG+MET was $599 (cost ratio=0.83; P=0.0160). The adjusted workload cost was also lower for RG+S+MET compared to STG+MET (cost difference=-$22, cost ratio=0.93; P=0.0120).

CONCLUSIONS: Compared to the new DPP-4 agent STG combined with MET, RSG, a thiazolidinedione, combined with MET was dominant versus the use of thiazolidinedione.

PDB25
COST OF ALL-CAUSE AND CARDIOVASCULAR DISEASE-RELATED HOSPITALIZATION IN PATIENTS WITH TYPE 2 DIABETES TREATED WITH EXENATIDE BID, SUFLONYLUREAS, OR INSULIN: A RETROSPECTIVE ANALYSIS OF THE LIFELINK DATABASE
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OBJECTIVES: To assess the cost of all-cause or cardiovascular disease-related hospitalization in a real world setting among patients with type 2 diabetes prescribed exenatide, a GLP-1 receptor agonist, compared to patients treated with sulfonylureas or insulins. METHODS: Analyses included patients in the LIFELINK database initiating exenatide (n=4,271), or insulin glargine (n=4,499) between June 1, 2005 and March 31, 2009, without a prescription for a glucose-lowering agent in the prior 9 months. Patients were followed for 12 months. Intention-to-treat analyses of costs of all-cause and cardiovascular disease-related hospitalizations were performed, or cost ratio was calculated, adjusted for differences in >300 clinical and demographic characteristics, and compared using propensity-score-weighted methods. RESULTS: Mean age (SD) was 53 (8) for patients treated with exenatide (n=14,400), 55 (12) for patients treated with sulfonylureas (n=43,242), and 52 (12) for patients treated with insulin (n=17,627): 43, 45, 53, and 55% of patients treated with exenatide, sulfonylureas, and insulin were male, respectively. More patients treated with exenatide were obese (17.0%) than patients treated with sulfonylureas (7.4%) or insulins (10.5%). Patients treated with exenatide were more likely to have hypertension (57.9%) than patients treated with sulfonylureas (49.9%) or insulins (50.2%). Patients treated with exenatide had significantly lower mean (SD) all-cause hospitalization costs than patients treated with sulfonylureas ($2,725 + 16,463 Exenatide; $3,304 + 17,378 sulfonylureas; p<0.001) or insulin ($3,211 + 17,969 Exenatide; $4,849 + 21,110 insulin; p<0.001). Patients treated with exenatide also had significantly lower mean (SD) cardiovascular disease-related hospitalization costs than patients treated with sulfonylureas ($428 + 6,174 Exenatide; $566 + 6,047 sulfonylureas; p<0.05) or insulin ($470 + 6,841 Exenatide; $726 + 7,012, insulin; p<0.01). CONCLUSIONS: Exenatide treatment was associated with significantly lower costs for all-cause and cardiovascular disease-related hospitalization compared to treatment with sulfonylureas or insulin.

PDB26
ECONOMIC EVALUATION OF GLIMEPIRIDE AND GLIMEPIRIDE/METFORMIN FOR TYPE-2 DIABETES MELLITUS IN MEXICO
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OBJECTIVES: To perform an economic evaluation of the use of glimepiride (GMP) and the fixed-dose combination (FDC) of glimepiride/metformin (GMP/Met) in the treatment of patients with DM-2, from the Mexican Public Health System perspective. METHODS: Two Markov models were designed for reflecting different treatment sequences. Model 1 is for not controlled diet and exercise and metformin intolerant patients, where GMP is compared to glibenclamide (GBC) and thiazolidinedione (TZD). Model 2 is for patients for which the lifestyle changed and the mono-treatment of patients with DM-2, from the Mexican Public Health System perspective. Analyses included patients in the LIFELINK database initiating glimepiride (GMP) or glibenclamide (GBC) and those who intensified therapy by adding gliclazide (GLZ), metformin (MET), or the fixed-dose combination (FDC) of glimepiride/metformin (GMP/Met). A Markov model was used for reflecting the disease progression of type-2 diabetes mellitus patients. The 2 states of the model were not controlled diet and exercise and not controlled diet and exercise. The likelihood of treatment initiation and the hypoglycemia episode were calculated. The dosage and efficacy of the treatment were assumed to be equivalent. The analysis showed that GMP was dominant versus the treatment sequences which included a beginning and maintenance therapy with thiazolidinedione. The savings from 3 years after GMP or GMP/Met instead of using TZD ranged from US$22,877 to US$632.1 per patient. Although GMP is more costly, it is associated with an increase in the mortality rate and the hypoglycemia events. A FDC of GMP/Met caused an incremental cost of 20% versus GBC and metformin separately. The average costs per additional life year obtain by using GMP instead of GMP/Met ranged from US$35,074.9 to US$3,261.4. The probabilistic sensitivity analyses for GMP/Met vs. GMP showed that GMP/Met was cost-effective health interventions regarding the use of glibenclamide and it is dominant versus the use of thiazolidinedione.