OBJECTIVES: As Type 2 Diabetes (T2D) progresses oral hypoglycemic 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% regular human insulin 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 £260 compared with £319 for BIA, a difference of 18%.

Various analyses were conducted, adjusting for baseline demographics, comorbidities, and costs. RESULTS: Compared using propensity-score-weighted methods. RESULTS: Mean age (SD) was 53 (8) for patients treated with exendin-4 (n = 14,400), 55 (12) for patients treated with sulfonylureas (n = 43,242), and 52 (12) for patients treated with insulin (n = 17,627); 43.4%, 53.5%, and 49.8% of patients treated with exendin-4, sulfonylureas, and insulin were male, respectively. More patients treated with exendin-4 were obese (17.0%) than patients treated with sulfonylureas (7.4%) or insulin (10.5%). Patients treated with exendin-4 were more likely to have hypertension (56.7%) than patients treated with sulfonylureas (49.9%) or insulin (50.2%). Patients treated with exendin-4 had significantly lower mean (SD) all-cause hospitalization costs than patients treated with sulfonylureas ($2,725 + 16,463 Exenatide; $3,304 + 14,400 MET; $10,757 + 16,463 STG; cost difference $1,480; cost ratio 0.87, p = 0.0120). Diabetes-related adjusted incremental cost saving of RSG + MET over STG + MET was $559 (cost ratio = 0.83, P = 0.0160). The adjusted workloss cost was also lower for RSG + MET compared to STG (cost ratio = 0.93, P = 0.0120).

CONCLUSIONS: Compared to the new DPP-4 agent STG combined with MET, RSG, a thiazolidinedione, combined with glimepiride and metformin, lowered all-cause and diabetes-related direct healthcare costs and indirect workloss costs.

PDB5

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 initiated on a new prescription for a glucose-lowering agent between June 1, 2005 and March 31, 2009, without a prescription for the same 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-utility analysis, adjusted for differences in >300 clinical and demographic characteristics, were compared using propensity-score-weighted methods. RESULTS: Mean age (SD) was 53 (8) for patients treated with exendin-4 (n = 14,400), 55 (12) for patients treated with sulfonylureas (n = 43,242), and 52 (12) for patients treated with insulin (n = 17,627); 43.4%, 53.5%, and 49.8% of patients treated with exendin-4, sulfonylureas, and insulin were male, respectively. More patients treated with exendin-4 were obese (17.0%) than patients treated with sulfonylureas (7.4%) or insulin (10.5%). Patients treated with exendin-4 were more likely to have hypertension (56.7%) than patients treated with sulfonylureas (49.9%) or insulin (50.2%). Patients treated with exendin-4 had significantly lower mean (SD) all-cause hospitalization costs than patients treated with sulfonylureas ($2,725 + 16,463 Exenatide; $3,304 + 14,400 MET; $10,757 + 16,463 STG; cost difference $1,480; cost ratio 0.87, p = 0.0120). Diabetes-related adjusted incremental cost saving of RSG + MET over STG + MET was $559 (cost ratio = 0.83, P = 0.0160). The adjusted workloss cost was also lower for RSG + MET compared to STG (cost ratio = 0.93, P = 0.0120).

CONCLUSIONS: Compared to the new DPP-4 agent STG combined with MET, RSG, a thiazolidinedione, combined with glimepiride and metformin, lowered all-cause and diabetes-related direct healthcare costs and indirect workloss costs.

PDB6

ECONOMIC EVALUATION OF GLIMEPRIIDE AND GLIMEPIRIDE/METFORMIN FOR TYPE-2 DIABETES MELLITUS IN MEXICO

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OBJECTIVES: To perform an economic evaluation of the use of gliclazide (GM) and the fixed-dose combination (FDC) of glimepiride/metformin (GM/Met) in the treatment of mild to moderate 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 GM is compared to gliclazamide (GBC) and thiazolidinedione (T2D). Model 2 is for patients which the lifestyle changed and the mono-therapy with metformin was insufficient for reaching a level of HbA1c 7% and a sulfonylurea/Met FDC is compared to T2D/Met. The direct costs of the drug treatment and the hypoglycemia episode were calculated. The dosage and efficacy of different oral antidiabetic agents and insulin were established based on the literature review and local practice. The unit costs were elicited from official sources. The time horizon was three years, divided in quarters. RESULTS: Therapy with GM was dominant versus the treatment sequences which included a beginning therapy with thiazolidinedione. The savings after three years with GM or GM/Met instead of using T2D ranged from US$5,087 to US$6,231 per patient. Although GBC had a lower cost, it is associated with an increase in the mortality rate and hypoglycemia events. A FDC of GM/Met caused an incremental cost of 20% versus GBC and metformin separately. The average costs per additional life year obtain by using GM instead of GBC ranged from US$5,074 to US$8,261.4. The probabilistic sensitivity analysis of GM/Met therapy compared to T2D/Met was represented in a cost-effectiveness plane in approximately 90% of the simulations.

CONCLUSIONS: Gliclazide mono-therapy (model 1) and the administration of GM/Met (model 2) represent highly cost-effective health interventions regarding the use of gliclazide and it is dominant versus the use of thiazolidinedione.