the Diabetes-Mellitus-Model (DMM version 3.2). METHODS: Cost analysis: Costs during the first year of treatment after switching to either BOT (glargine plus glimepiride and metformine) or CT (premixed insulin 30/70) were analysed. Costs for antidiabetic agents, injection devices (pens, syringes) and monitoring devices (test strips, lancets) were included. Other medical supplies were assumed to be the same or not relevant from the SHI perspective. Insulin utilization was extrapolated up to one year by linear regression based on LAPTOP trial data. The cost of drugs, devices and supplies (retail prices) were taken from official standard sources. Univariate sensitivity analyses were performed for all cost parameters (variation ±20%). DMM-Simulation: Baseline values for the model simulation were as follows: mean age of the population 60 ± 9.0 years, mean duration of diabetes 9.0 ± 7.0 years and mean HbA1c value 8.8 ± 0.9%. The response rate (HbA1c ≤ 7%) for BOT was 49% and for CT 39%. Mean HbA1c values for responders were 6.46% and 6.55% respectively. RESULTS: Annual savings with the BOT regimen add up to 236.35€/H11006. Insulin utilization and insulin prices had the highest impact on overall costs. The relative risk reduction (RRR) for micro-vascular events after 10 years of diabetes mellitus was 9.0% for BOT versus CT. The combined results of these two analyses show that BOT in addition to its short (HbA1c) and long term (micro-vascular events) medical benefits is associated with lower costs from the SHI perspective.

INSULIN USE AND COSTS OF CARDIOVASCULAR DISEASE EVENTS (CVD) AMONG PATIENTS WITH TYPE 2 DIABETES
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OBJECTIVES: To compare CVD event-related costs among patients with Type 2 diabetes (T2D) with and without insulin use. METHODS: Patients with T2D were identified from insurance claims (1998–2004) of a large US health insurance plan. Index date was date of first CVD event; for subjects without CVD events, index date was a medical claim date in the same calendar quarter as the index date for a matched subject in the CVD group. Baseline period was a minimum of 12 months prior to index date, with variable follow-up after index date. Filled prescriptions for insulin were identified from pharmacy claims. US Census data were used to identify distributions of ethnicity and income. Patients with and without insulin use were compared on inflation-adjusted CVD-event related medical costs, adjusted for other risk factors. Two-part models were estimated; the first part used logistic regression to estimate probability of any cost. The second part estimated mean cost among patients with costs >$0; results were compared for estimations using GLM vs. OLS on a log-transformed cost with heteroskedastic smearing estimator. RESULTS: Among 342,638 T2D patients, 4.3% used insulin. Average CVD event-related medical costs were $646 and $705 in insulin vs. non-insulin users (p = 0.5590). Among non-insulin users, 6.0% incurred costs, vs. 4.8% of patients with insulin use (p < 0.0001). Adjusted odds of incurring CVD event related costs were 25% lower for insulin-users than for non-insulin users (OR = 0.75, 95% CI: 0.68, 0.82). Among patients with costs, adjusted mean costs were not statistically significantly different between insulin and non-insulin groups, regardless of estimation technique. CONCLUSION: T2D patients with history of insulin use were less likely to incur CVD-related medical costs than non-insulin users, despite adjustment for risk factors. However, average costs were not statistically significantly different between groups. Estimation technique had a substantial impact on range of predicted mean costs.

MEALTIME INSULIN ASPART REDUCES THE LONG-TERM COST OF COMPLICATIONS COMPARED TO HUMAN INSULIN AS PART OF BASAL-BOLUS THERAPY IN POLISH TYPE 2 DIABETES PATIENTS
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OBJECTIVES: Modern insulin analogues such as insulin aspart (IASp, NovoRapid) offer benefits in terms of glycemic control, improved hypoglycemic profile and faster onset of action compared to human insulin (HI). A modeling analysis was performed to estimate the long-term economic savings due to reduced complications in Polish type 2 diabetes patients switching to mealtime IAsp from HI basal-bolus therapy, based on results of the European PREDICTIVE study. METHODS: Treatment effects (changes in HbA1c, hypoglycemic event rate and body weight) were derived from PREDICTIVE. Baseline cohort characteristics were taken from published data representative of Polish type 2 diabetes patients and supplemented with trial data. A published and validated diabetes model was used to project long-term outcomes and account costs for patients receiving either mealtime IAsp or HI as part of a basal-bolus therapy, with or without oral antidiabetic agents. Costs were derived from published sources and accounted for a health care payer perspective in 2006 Polish Zloty (PLN). Future economic and clinical outcomes were discounted at 5% annually. RESULTS: Projections indicated that IAsp was associated with improvements in life expectancy of 0.03 years compared to HI (5.12 ± 0.12 versus 5.09 ± 0.12 years). Improved glycemic control with IAsp led to reduced incidence of renal complications, resulting in a mean cost savings of approximately PLN 360 per patient (PLN 2910 versus 3270). Mean cardiovascular complication costs were comparable with both treatments (PLN 5697 versus 5769 per patient) due mainly to a high baseline prevalence in the cohort. Small cost savings were observed in terms of eye, diabetic foot and other complications over patient lifetimes. CONCLUSION: Improvements in HbA1c and body weight associated with IAsp (compared to HI) in PREDICTIVE were projected to lead to long-term cost savings of approximately PLN 480 per patient (PLN 13,423 versus 13,903) due to complications avoided in Polish type 2 diabetes patients.

COST OF ILLNESS STUDY OF TYPE-2 DIABETES IN COLOMBIA
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OBJECTIVES: To determine the cost of illness of type 2 diabetes mellitus in Colombia from the Ministry of Health and societal perspectives. METHODS: A previously published Markov transition model was adapted, using the clinical expertise of a Colombian endocrinologist. Transition probabilities for the model were derived from a review of the international literature on the epidemiology of type 2 diabetes mellitus. Direct resources were identified and costed using national pricing lists, international health care guidelines, and other Colombian studies, as well as other costs from different countries. Indirect costs were

THE DIABETES-MELLITUS-MODEL (DMM VERSION 3.2)

METHODS: Cost analysis: Costs during the first year of treatment after switching to either BOT (glargine plus glimepiride and metformine) or CT (premixed insulin 30/70) were analysed. Costs for antidiabetic agents, injection devices (pens, syringes) and monitoring devices (test strips, lancets) were included. Other medical supplies were assumed to be the same or not relevant from the SHI perspective. Insulin utilization was extrapolated up to one year by linear regression based on LAPTOP trial data. The cost of drugs, devices and supplies (retail prices) were taken from official standard sources. Univariate sensitivity analyses were performed for all cost parameters (variation ±20%). DMM-Simulation: Baseline values for the model simulation were as follows: mean age of the population 60 ± 9.0 years, mean duration of diabetes 9.0 ± 7.0 years and mean HbA1c value 8.8 ± 0.9%. The response rate (HbA1c ≤ 7%) for BOT was 49% and for CT 39%. Mean HbA1c values for responders were 6.46% and 6.55% respectively. RESULTS: Annual savings with the BOT regimen add up to 236.35€/H11006. Insulin utilization and insulin prices had the highest impact on overall costs. The relative risk reduction (RRR) for micro-vascular events after 10 years of diabetes mellitus was 9.0% for BOT versus CT. The combined results of these two analyses show that BOT in addition to its short (HbA1c) and long term (micro-vascular events) medical benefits is associated with lower costs from the SHI perspective.