database. Baseline demographics, HbA1C, co-morbidities, health care utilization, pharmacy copayment, and concomitant followup antidiabetic medications were controlled. Costs were evaluated using actual paid claims by health insurance, adjusting for inflation to the most current year value. **RESULTS:** Patients at baseline had same mean age 54 years, 44 vs. 52% female, baseline HbA1C 9.3 vs. 8.9%, access to endocrinologist 36 vs. 46%, average number of oral antidiabetic agents 2.3 vs. 2.0, patients with medical insurance claims for hypoglycemia 3.2 vs. 4.3%, Charlson comorbidity score for overall comorbidities 0.64 vs. 0.82, and 6-month total health care costs $8,797 vs. $12,924 in glargine vs. NPH initiator groups, respectively. Adjusted 1-year mean HbA1C was 8.05 vs. 8.51% ($\delta = -0.45$, $p = 0.0036$) and 2-year mean HbA1C was 8.03 vs. 8.37% ($\delta = -0.33$, $p = 0.0099$) for glargine and NPH, respectively. At end of 2 years, 16.6% NPH initiators dispensed glargine prescriptions while 2.7% glargine initiators dispensed NPH prescriptions. Adjusted rate of patients per quarter in the first year with medical claims for hypoglycemia was 1.7 vs. 2.9% ($\delta = -1.2\%$, $p = 0.0559$) and 2-year quarterly rate was 1.55 vs. 2.51% ($\delta = -0.96\%$, $p = 0.0139$). Adjusted 1-year total health care costs were $16,184 vs. $21,104 (quarterly $\delta = -\$1,034$, $p = 0.0372$) and 2-year costs was $30,032 vs. $42,208 (quarterly $\delta = -\$1,522$, $p = 0.0029$). **CONCLUSION:** Initiation of insulin glargine, relative to NPH, was associated with sustained improvements in glycemic control with lower rate of medically claimed hypoglycemia and lower total health care expenditures in patients with T2DM.

PDB15

LOWER RATE OF HOSPITALIZATION IN SUBSEQUENT YEAR OF INSULIN GLARGINE VS NPH INITIATION IN INDIVIDUALS WITH TYPE 2 DIABETES (T2DM)

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OBJECTIVES: To compare 1-year health care utilization and costs in patients initiating insulin glargine vs NPH. **METHODS:** Patients with T2DM (03/2001–C03/2005) who failed oral agents and initiated insulin glargine or NPH were evaluated using the Integrated Health Care Information System, a US managed care health plan database. Patients were continuously enrolled with managed care health plans for °Ý6 months before and 12 months after insulin initiation. Propensity score matched NPH to glargine initiators by baseline demographics, HbA1c, co-morbidities, health care utilization, and pharmacy copayment. Conditional logistic regression, McNemar's test, and paired t-test were used to compare subsequent utilizations/ costs between two insulin groups. Costs were paid by health insurance, adjusting for inflation to the most current year value in database. **RESULTS:** Matched sample (n = 1,468) was 46% female, mean age 54.6 yrs., A1C 9.2%, Charlson Comorbidity Index (CCI) 0.69, metformin-use 77.6%, sulfonylureas 77.6%, and thiazolidinedione 56%. Before matching, glargine initiators were more likely than NPH initiators to be female, had higher HbA1c, CCI, more use of TZD, sulfonylurea and statins, fewer visits to an endocrinologist, higher out-of-pocket drug copayment, lower total health care utilization and associated costs (except diabetes medications). After propensity score matching, no differences remained between matched pairs. During 12-month follow-up, glargine initiators showed a lower hospitalization rate (OR:0.73, 95%CI [0.57–0.94], $P = 0.0124$) while outpatient and emergency service utilization was not statistically different between groups. Number needed to treat with glargine was 17 (95% CI: 9–59) to avoid hospitalization for a patient. For the same follow-up period, glargine use on average cost $532 vs. $293 for NPH ($P < 0.0001$) and $2097 vs $1820 for all antidiabetic medications ($P < 0.0001$). **CONCLUSION:** Initiation of insulin glargine is associated with lower rate of hospitalization compared to NPH in individuals with T2DM. This clinical benefit is achieved with a modest increase in pharmacy expenditures for treating diabetes.

PDB16

GLYCEMIC CONTROL WITH INSULIN GLARGINE PLUS GLULISINE VERSUS PREMIX IN REAL WORLD PRACTICES—A RANDOMIZED, PROSPECTIVE, OBSERVATIONAL STUDY

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OBJECTIVES: Despite extensive use of basal-bolus and premixed analog insulin therapy, real-world comparative effectiveness of the regimens has not been determined. **METHODS:** Patients with Type 2 diabetes at two US endocrinology practice centers were randomized to insulin glargine plus glulisine (GLAR/GLU, n = 106) or analog premix (n = 91). Subsequent to randomization, patients continued treatment following center's usual practice with no additional therapeutic protocols. Data collected at 0, 3, 6 and 9 months included A1C, hypoglycemia, insulin dose, concomitant medications, and therapy change. Medication costs were estimated using published average wholesale price. **RESULTS:** Treatment groups were comparable at baseline with mean age 56 years, 46% male, 59% Caucasian, and 38% African-American, duration of diabetes 13 years, HbA1C 9.25%, and BMI 35.8 kg/m2. About 70% patients used oral hypoglycemic agent(s) during 4 months before randomization, 88% used insulin with mean daily dose of 71IU, and 29% had chart records for hypoglycemia. Mean follow-up time was 183 days. 1 patient (1%) randomized to GLAR/GLU switched to premix therapy relative to 9 (10%) randomized to premix switched to GLAR/GLU. In ITT analysis, adjusted mean follow-up HbA1C was 6.98% in GLAR/GLU vs. 7.57% in premix ($\delta = -0.59\%$, $p = 0.009$) and HbA1C reduction was 2.27% (95% CI: 1.63–2.91) vs. 1.68% (1.20–2.16). Mean number of concomitant oral anti-diabetic agents were 0.94 vs. 1.22 ($\delta = -0.28$, $p = 0.041$). Mean daily insulin dose was 74IU vs. 85IU ($\delta = -11$, $p = 0.267$). Hypoglycemia was recorded in charts for 36% vs. 43% ($\delta = -7\%$, $p = 0.374$) patients in GLAR/GLU vs. premix. Daily costs for all anti-diabetic medications were $9.8 in GLAR/GLU vs. $11.9 in premix ($\delta = -\$2.1$, $p = 0.036$). Treatment costs per 1% HbA1C reduction during follow-up period (183 days) were $790 for GLAR/GLU vs. $1,296 for premix. **CONCLUSION:** In real world practices, glargine plus glulisine, relative to analogue premix, produces improved glycemic control with lower total diabetes medication costs.

PDB17

MEDICAL COSTS AMONG INDIVIDUALS WITH DIABETES, HYPERTENSION OR HYPERCHOLESTEROLEMIA

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OBJECTIVES: Diabetes, hypertension and high cholesterol are all prevalent in the United States. The purpose of this research is