DIABETES—Clinical Outcomes/Healthcare Policy

PDB1
RELATION BETWEEN MEDICATION COMPLIANCE AND GLUCOSE CONTROL IN PATIENTS WITH TYPE 2 DIABETES
Shi SG1, Knight T2, Livengood KB1, Lubowski T2, Walden S3, Nichol MB1
1University of Southern California, Los Angeles, CA, USA; 2Pfizer Inc, New York, NY, USA

OBJECTIVES: To determine whether diabetes patients who are more compliant with their medication therapy tend to have a better glucose control. METHODS: The analysis is based on clinical and survey data of 301 patients from 6 clinical centers in different regions of the U.S. Medication compliance is quantified from the Morisky score, and the A1c fraction of glycosylated hemoglobin (HbA1c) from a recent lab test is used to measure glucose control. The relation between the two is established with a general linear model controlling for a set of covariates. The covariates include diabetes severity proxies (the number of anti-diabetic agents, insulin vs. non-insulin regimen, diabetes complications), length of time with diabetes, demographic factors (age, gender, ethnicity), body mass index score (BMI), education level, payment source, and clinic site. RESULTS: About 70% of the diabetes patients in the sample were considered compliant (Morisky score of 3 or greater). Compliance patients had an HbA1c score 10% better or lower than non-compliant patients, adjusted for covariates (p = 0.0003). As a by-product of the analysis, each additional anti-diabetes medication was seen to be associated with 3.6% increase in HbA1c score. CONCLUSIONS: Self-reported compliance with anti-diabetic medications appears to be related to HbA1c. Future research should correlate self-reported compliance with pharmacy claims, and should be expanded to a different sample.

PDB2
IMPROVEMENT OF HEMOGLOBIN A1C (HBA1C) TESTING AND ANALYSIS OF PARTICIPANT-REPORTED RESULTS IN CAREPATTERNS® FOR DIABETES PROGRAM
Slezak J1, Hu L, Berger J2
Caremark, Northbrook, IL, USA

OBJECTIVES: HbA1c is considered a cornerstone of diabetic care, a recognized clinical measure within diabetes disease management and an important tool to help patients assess their own diabetes management. This study examines the frequency of participant-reported HbA1c testing and improvement of results after the Carepatterns® intervention. METHODS: Study participants enrolled in the program and were enrolled continuously for at least 1 calendar year beginning in 2000. They were asked if they received the A1c test from their physician during their initial and annual telephonic assessment calls. The result of the test was collected if available. If the participant did not receive the test or did not know if they had, they were educated on its importance. Participants were encouraged to ask their doctor about testing and to discuss their results. Data were compiled and a 95% confidence interval and corresponding p-value was computed from the formula for the difference between 2 independent proportions and paired t-tests. RESULTS: Of 4257 study participants, 69% initially reported receiving an HbAlc test, and 83% at annual for a D 14%, (95% CI 12%-16%, p < 0.05). An analysis of 373 participant reported test values was performed using a matched paired-t test when the value of the test was provided during initial and annual assessment. At initial assessment, mean test result of 7.02% was reported and during their annual call, 6.76%. The mean change 0.26 (95% CI 0.16 to 0.37 p <0.05) was significant. CONCLUSIONS: These findings show that CarePatterns® for diabetes program enrollees are improving their compliance with the HbA1c test as well as lowering their participant-reported test values after participating in the program.

PDB3
EFFICACY OF INSULIN GLARGINE IN PATIENTS WITH TYPE 1 AND 2 DIABETES
Plauschinat CA1, Cryar AK, Godley PJ, Nguyen AB, Browne BA1
Scott & White Memorial Hospital, Temple, TX, USA

OBJECTIVES: Insulin glargine is a biosynthetic insulin analog with a prolonged duration of action. Our objective is to determine the efficacy of insulin glargine regarding glycemic control in patients with Type 1 and 2 diabetes. A secondary objective is to determine potential cost savings, if any, that may result from the use of insulin glargine as an alternative to oral hypoglycemic agents in patients with Type 2 diabetes. METHODS: A total of 135 patients with a diagnosis of Type 1 or 2 diabetes initiated on insulin glargine by institutional endocrinologists from April 2001 to September 2001 were included in this study. Medical and pharmacy claims databases were retrospectively analyzed 1 year pre- to 1 year post-initiation of insulin glargine. Hemoglobin A1c (HbA1c), frequency of hypoglycemic adverse events, and utilization of oral hypoglycemic agents were evaluated. RESULTS: Average HbA1c significantly decreased by 0.31% from 8.48% pre-glargine to 8.16% post-glargine (P = 0.012). The overall frequency of hypoglycemia and nonsevere hypoglycemia were both significantly lower in the post-glargine period (69% vs. 36%, P < 0.001 and 38% vs. 19%, P < 0.01, respectively). In patients with Type 2 diabetes, a trend toward decreased utilization of oral hypoglycemic agents in the post-glargine period was observed in the sulfonylureas, thiazolidinediones, and biguanides (58.5% vs. 39%, P < 0.01). The use of insulin glargine as an alternative to oral hypoglycemic agents resulted in