extracted from a UK primary care database (The Health Improvement Network). Patients were required to have at least 12 months of data before and after switching. The principle analysis was the change in HbA1c; secondary analyses included change in weight and insulin dose. Hypoglycaemia could not be assessed due to inconsistency in the recording of episodes. Multivariate analyses were used to adjust for baseline characteristics and confounding variables. RESULTS: Mean HbA1c levels at baseline were similar in the T1 and T2 cohorts (8.8% and 8.9% respectively). After adjustment, both diabetic cohorts showed statistically significant reductions in mean HbA1c 12 months after switch, by 0.38% (p < 0.001) in T1 and 0.31% (p < 0.001) in T2 patients. Improvement in HbA1c was positively correlated with baseline HbA1c; patients with baseline HbA1c ≥ 8% had reductions of 0.57% (p < 0.001) and 0.47% (p < 0.001), respectively. There was no significant change in weight or total daily insulin dose while on glargine. The majority of patients received a basal-bolus regimen prior to and after switch (mean 79.3% before and 77.2% after switch in T1 patients and 80.4% and 76.8%, respectively in T2 patients, p > 0.05). CONCLUSIONS: In routine clinical practice, switching from NPH to glargine provides the opportunity for improving glycemic control in diabetes patients inadequately controlled by NPH.

**PDB3**

**SWITCHING FROM PREMIXED INSULIN TO INSULIN GLARGINE-BASED REGIMEN IMPROVES GLYCEMIC CONTROL IN PATIENTS WITH TYPE 1 OR TYPE 2 DIABETES: A RETROSPECTIVE PRIMARY CARE-BASED ANALYSIS**

McEwan P1, Gordon JP1, Sharpin P1, Longman AJ1, Peters J1, Tetlow AP1
1Cardiff Research Consortium, Cardiff, UK, 2Cardiff University, Cardiff, UK

OBJECTIVES: To investigate the effect on glycemic control of switching from a premix-based regimen to a glargine-based regimen in 528 patients with type 1 (n = 183) or type 2 (n = 345) diabetes, using unselected primary care data from a UK database (The Health Improvement Network). METHODS: Patients were required to have at least 12 months of available data, before and after switching. The principle analysis was the change in HbA1c; secondary analyses included change in weight, bolus usage and insulin dose. Hypoglycaemia could not be assessed due to lack of consistency in the recording of episodes. Multivariate analyses were used to adjust for baseline characteristics and confounding variables. RESULTS: Mean HbA1c levels at baseline were similar in the T1 and T2 cohorts (9.4% and 9.3% respectively). After adjustment both cohorts showed significant reduction in mean HbA1c 12 months after the switch: by −0.67% (p < 0.001) in the T1 cohort and by −0.53% (p < 0.001) in the T2 cohort. Patients with a baseline HbA1c ≥ 10% had the greatest reduction in HbA1c, by −1.7% (p < 0.001) and −1.2% (p < 0.001), respectively. Proportion of patients receiving a co-bolus prescription went from 24.6% on premix to 95.1% on glargine in the T1 cohort, p < 0.001 and from 16.2% to 73.9% in the T2 cohort, p < 0.001. There was no significant change in weight in the T2 cohort with a moderate increase in T1 patients (0.3 kg and 3.7 kg respectively, p > 0.05). Total insulin use (∆SD) increased in T2 patients (0.67 ± 1.35 IU/Kg to 0.88 ± 1.33 IU/Kg, p < 0.001) with no significant increase in T1 diabetes patients. CONCLUSIONS: In everyday practice, patients with T1 or T2 diabetes inadequately controlled by premix insulins experienced significant improvement in glycemic control over 12 months after switching to a glargine-based regimen. These findings support the use of glargine plus boluses in patients poorly controlled on premix.

**PDB4**

**GLYCEMIC CONTROL OF TYPE-2 DIABETES IN MAKKAH SECURITY FORCES HEALTH CARE CENTER (MSFHCC), SAUDI ARABIA: A DISCRIPTIVE PILOT STUDY**

Suliman MA1, Alkelya MA2, Al-Shareef MA1
1Makkah Security Forces Health Care Center, Makkah, Saudi Arabia, 2King Abdullah International Medical Research Center, Riyadh, Saudi Arabia

OBJECTIVES: The control of blood glucose improves the long term outcomes for patients with type 2 diabetes; this study examined the levels of glycemic control in a clinic at MSFHCC, Saudi Arabia. METHODS: Data were obtained from patient medical records. All patients who met the inclusion criteria: (with type 2 diabetes, made at least four visits during one year, had their glycated hemoglobin (A1c) level been checked), the time frame for sampling is 18 months ending in December 2007. Descriptive statistics, logistics regression, and ANOVA were used in the analysis. RESULTS: Four hundred nine patients’ records met the inclusion criteria, male are 64.7% of the sample, the means for age, A1c, BMI, 0.65 the duration of the DM were 53.4, 8.3%, 30.6 and 9.3 years, respectively. A total of 24.9% of the sample has A1c at the target control level (<7%), the test of differences of means of age, BMI and Duration of having DM across the levels of A1c (controlled, not well controlled (7% < A1c < 8.5), and poorly controlled (A1c ≥ 8.5)) did show consistent results except BMI variable, group at the controlled HbA1c level has significant higher BMI means than the group with poorly controlled A1c level. 13.2% of the sample treated with oral mono-therapy antidiabetic drugs, 25.6% with a combination of Insulin and Metformin, and the rest were with multitherapy. In the logistic regression model, the type of therapy and the duration of diabetes were significant predictors for whether patient has controlled A1c level. CONCLUSIONS: The high rate of uncontrolled diabetic patients is an evidence of shortcoming. Large data might provide much and precise information to explain this high rate. The unexpected relationship between BMI and A1c level which noticed in controlled group could be explained by short duration of diabetes, early aggressive therapy regimens or other pathophysiological factors. Further follow up of such controlled group may provide an explanation of such relationship.

**PDB5**

**GLYCEMIC CONTROL FOLLOWING INITIATION OF INSULIN GLARGINE OR DETEMIR IN PATIENTS WITH TYPE 2 DIABETES MELLITUS: AN ANALYSIS OF ELECTRONIC MEDICAL RECORDS**

Levin P1, Danel A2, Bromberger L1, Choi JC1, Mersey J1
1MODEL Clinical Research, Baltimore, MD, USA, 2Sanofi-Aventis, Paris, France, 3Rutgers University, Piscataway, NJ, USA

OBJECTIVES: We examined glycemic outcomes in patients with type 2 diabetes (T2D) initiated to insulin glargine (GLAR) or detemir (DET) using electronic medical records (EMR) from a specialty practice in Baltimore, US. METHODS: Patients’ EMRs using GLAR (n = 134) or DET (n = 88) between January 2005–2007 with at least 4 available clinic visits were evaluated. Each patient on DET was matched with one or more patients on GLAR by baseline HbA1c. Average follow-up time was 6 months.

RESULTS: Patients were similar in age (59 vs 60 years), HbA1c (8.65 vs 8.46%), and BMI (33.6 vs 33.7 kg/m2) but differed in T2D duration (12.9 vs 10.0 years, P = 0.03) and gender (female 58 vs 44%, P = 0.04) between GLAR and DET, respectively. Prior use of antidiabetic drugs was similar except for a higher percentage of patients using premixed insulin in GLAR (24.9% vs 9.9% [DET], P = 0.004) and of patients using exenatide in DET (32.9% vs 6.2 % [GLAR], P = 0.0001). Unadjusted A1C values