questionnaire regarding their medical care and self management. Medications (within the last 7 days), physical examination and laboratory tests were documented. DDMP participation was validated by the primary physician. Only DM2s with statutory health insurance and validated DDMP enrolment were included in the analysis (n = 166). Regression analyses adjusting for confounders (age, sex, education, diabetes duration and previous diabetes complications) were conducted. **RESULTS:** DDMP enrolees (n = 89) reported medical examination of eyes and feet and medical advice regarding diet and physical activity more frequently ($p < 0.005$), received antidiabetic and antihypertensive medications more often ($p < 0.05$) and attended diabetes education more frequently ($p < 0.005$). DDMP enrolees measured their blood pressure more frequently ($p < 0.05$). The groups did not differ regarding Hemoglobin A1c (HbA1c), but of 54 DM2s with values over 7%, only 3.6% of DDMP enrolees were receiving no antihyperglycemic medication whereas this was true for 38.5% of those not in DDMP. This difference remained significant ($p = 0.0129$) after adjustment for diabetes duration. **CONCLUSIONS:** According to our study, health care quality in DDMPs is improved. However, patient self-management of all diabetics must be improved.

PDB61

DIABETES REGIMEN UTILIZATION IN A LARGE MANAGED CARE SETTING; A COMPARISON WITH ADA/EASD CONSENSUS STATEMENT GUIDELINES

Palmer L[1], Conner C[2], Hammer M[3], Bouchard JR[4], Anderson JA[5]
[1]Thomson Reuters, Washington , DC, USA, [2]Novo Nordisk, Seattle, WA, USA, [3]Novo Nordisk A/S, Bagsværd, Denmark, [4]Novo Nordisk, Inc., Princeton, NJ, USA, [5]Thomson Reuters, Ann Arbor, MI, USA

OBJECTIVES: Diabetes extracts a considerable economic toll on the US health care system. An analysis conducted in 2007, indicated that the economic burden of diabetes was $174 billion, with direct medical expenditures accounting for $116 billion. Originally published in 2006 and updated yearly, the American Diabetes Association (ADA)/European Association for the Study of Diabetes (EASD) Consensus Algorithm for the Initiation and Adjustment of Therapy, stands to guide health care practitioners in determining the most appropriate lifestyle and pharmacotherapeutic interventions for patients with Type 2 diabetes. We conducted an analysis to compare medication regimens from claims adjudicated by patients with Type 2 diabetes to treatment regimens outlined in the ADA/EASD guidelines. **METHODS:** This retrospective claims analysis utilized data from the 2007 MarketScan® Commercial Claims and Encounters and the Medicare Supplemental and Coordination of Benefits databases from Thomson Reuters. Medication regimens were evaluated for patients with Type-2 diabetes and at least one prescription claim for the fourth quarter of 2007. In order to be considered as part of a treatment regimen all medications must have had an overlapping 45 day period of utilization in the quarter. All identified medication regimens were compared to 2008 ADA/EASD consensus guidelines **RESULTS:** A total of 191,535 patients were included in the analysis. In rank order, the top five treatment regimens by utilization frequency were as follows: biguanide monotherapy (27.9%), sulfonylurea monotherapy (14.53%), sulfonylurea+biguanide combination therapy (12.01%), thiazolidinedione monotherapy (9.21%), thiazolidinedione+biguanide combination therapy (6.97%). **CONCLUSIONS:** As expected, following ADA/EASD guidelines, monotherapy with biguanide and a regimen of biguanide+sulfoylurea were among the most frequently utilized regimens. The high degree of sulfonylurea monotherapy utilization may suggest that many patients may not tolerate monotherapy with biguanide. In all cases treatment must be individualized requiring the use of other agents to control blood glucose levels.

PDB62

ECONOMIC IMPACT OF COMPLIANCE AND PERSISTENCE TO TREATMENT WITH ANTIDIABETES MEDICATION IN T2DM—A SYSTEMATIC REVIEW

Breitscheidel L[1], Stamenitis S[1], Dippel FW[2], Schöffski O[3]
[1]Kendle GmbH, Munich, Germany, [2]Sanofi-Aventis, Berlin, Germany, [3]Universität Erlangen-Nürnberg, Nürnberg, Germany

OBJECTIVES: Suboptimal compliance and failure to persist with antidiabetes therapies are of potential economic significance. The present research aims to review the recent literature regarding the impact of poor compliance and persistence with antidiabetes medications on the cost of health care or its components for patients with type 2 diabetes mellitus (T2DM). **METHODS:** Systematic literature search was conducted in pubmed for relevant articles published in the period between January 1, 2000 and April 30, 2009. Studies describing economic consequence of compliance and/or persistence with pharmaceutical antidiabetes treatment were identified. **RESULTS:** Of 449 articles corresponding to the primary search algorithm, 12 studies (all conducted in USA) fulfilled inclusion criteria regarding the economic impact of compliance and/or persistence with treatment on the overall cost of T2DM care or its components. Compliance was assessed via medication possession ratio (MPR) in 10 studies, and ranged from 0.52 to 0.93 depending on regimen. Persistence was assessed in one study. Mean total annual costs per patient having T2DM varied between the studies, ranging from $4,570 to $17,338. In 7 studies medication compliance was inversely associated with total health care costs, while in four other studies inverse associations between medication compliance and hospitalisation costs were reported. In one study increased adherence did not change overall health care costs. **CONCLUSIONS:** Improved compliance can lead to reductions of the total health care costs in T2DM, mainly through decrease in hospitalisations. Studies assessing economic impact of persistence with pharmacotherapy in T2DM are limited, and studies investigating cost consequences of compliance are predominantly using MPR as a measure of compliance. Further research is needed in countries other than USA to assess impact of compliance and persistence to pharmacotherapy on T2DM costs in country-specific settings. Researchers should follow definitions of compliance and persistence proposed by the ISPOR Medication Compliance and Persistence Special Interest Group.

PDB63

THE UTILIZATION OF ROSIGLITAZONE AND PIOGLITAZONE AFTER THE CARDIOVASCULAR RISK-WARNINGS: WAS THERE A DIFFERENTIAL EFFECT?

Jain R[1], Mullins CD[2], Lee H[3], Wong W[3]
[1]University of Georgia, Athens, , GA, USA, [2]University of Maryland, Baltimore, MD, USA, [3]CareFirst BlueCross BlueShield, Baltimore, MD, USA

OBJECTIVES: Meta-Analyses of oral hypoglycemic agents (OHA) revealed that Rosiglitazone (Rosi) increased the risk of Myocardial Infarction (MI) and Heart Failure (HF), and Pioglitazone (Pio) increased the risk of HF and decreased the risk of MI. The objective of this research is to compare OHA utilization patterns, before and after these publications. **METHODS:** CareFirst BlueCross BlueShield's claims were analyzed for patients continuously enrolled from January 2005 through December 2007 who started on mono-Rosi or mono-Pio. The "pre-publication" period (November 1, 2006—March 31, 2007) was compared to the "post-publication" period (July 1, 2007—December 1, 2007) using a difference-in-difference approach. Multinomial logistic regression (MLR) explored discontinuation; continuation with monotherapy or adding another drug; and switching after adjusting for gender, age, type of insurance, history of MI or HF and risk factors for MI and HF. **RESULTS:** The number of monotherapy Rosi users decreased from the pre (N = 368, 5.94%) to post (N = 170, 2.87%) period, while monotherapy Pio use was stable across the two periods. The proportion who switched from Rosi to non-Rosi drugs changed from 2.17% in pre-period to 5.88% in post period. Adjusted relative risk was 2.66 (95 % CI 1.0569, 6.7689). Pio to non-pio drugs switching was 1.48% in pre-period and 1.16% in post-period (relative risk not significant). Therefore, the impact of the new studies on Rosi users to switch to non-Rosi drug, relative to Pio users before and after the publication was 3.6189 (90%CI 1.051, 12.457). **CONCLUSIONS:** Consistent with prior research, the utilization of Rosi declined by more than half in the post-period. Additionally, Rosi users were three times more likely to switch to a non-Rosi drug in the post period, relative to Pio users. Therefore, our results show that the publications about safety risks had differential impact between the two drugs within therapeutic class.

PDB64

A RETROSPECTIVE DATABASE ANALYSIS OF PERSISTENCE WITH INSULIN IN PATIENTS WITH TYPE 2 DIABETES ADDING MEALTIME INSULIN TO A BASAL REGIMEN

Kalsekar A[1], Bonafede MM[2], Pawaskar MD[1], McGuffie K[3], Torres A[4], Kelly KR[1], Curkendall S[4]
[1]Eli Lilly and Company, Indianapolis, IN, USA, [2]Thomson Reuters, Cambridge, MA, USA, [3]Thomson Reuters, Washington, DC, USA, [4]Thomson Reuters, Washington DC , DC, USA

OBJECTIVES: Following a commitment to an intensive glucose-lowering regimen that includes mealtime insulin is eventually required by patients taking basal insulin to maintain good glycemic control. The objective of this study was to characterize and examine factors associated with persistence to mealtime insulin. **METHODS:** Patients with diagnosed type-2 diabetes, with at least 2 prescriptions for mealtime insulin (index medication) between July 2001 and Sept 2006, were identified from a US managed care claims database. Patients were required to have 6 months pre- and 15 months post-index continuous eligibility and at least 2 basal insulin prescriptions in pre-index period. Persistence measure #1 was defined by the absence of prescription gap of greater than 90 days, with non-persistence effective the date of the last prescription prior to the 90 day gap. Persistence measure #2 required one prescription per quarter to be persistent at 12 months; persistence at 3 and 6 months were defined similarly. Logistic regression models were used to examine predictors of persistence to mealtime insulin at 12 months. **RESULTS:** Patients adding mealtime insulin to their basal regimen (n = 4,752; 51% male, mean age = 60.3 years) mostly used insulin analogs (60%) and vial/syringe (87%). The median number of mealtime insulin prescription claims filled per patient was 2, 3 and 4 at 3, 6 and 12 months respectively, with the median time between refills being 75.5 days. Persistence to mealtime insulin was 40.7%, 30.2% and 19.1% using measure #1 and 74.3%, 55.3% and 42.2% using measure # 2 at 3, 6 and 12 months, respectively. Patients initiating with human insulin were less likely to be persistent across measures of persistence (OR < 0.80, $p < 0.01$). Additional predictors of persistence at 12 months included age, copayment, mental health comorbidity and polypharmacy. **CONCLUSIONS:** Persistence to insulin therapy is poorer than one would anticipate and is significantly lower for human insulin compared to analogs.

PDB65

REAL-LIFE PRESCRIPTION PATTERNS SHOW FEWER TREATMENT CHANGES WITH BASAL INSULIN ANALOGS COMPARED TO NPH IN TYPE 2 DIABETES IN THE NETHERLANDS

Thomsen TL[1], Heintjes EM[2], Penning-van Beest FJA[2], Christensen TE[1], Herings RM[2]
[1]Novo Nordisk A/S, Virum, Denmark, [2]PHARMO Institute, Utrecht, The Netherlands

OBJECTIVES: Using the Dutch PHARMO database, the aim was to 1) determine the percentage of type 2 diabetes (T2D) patients starting on long-acting insulin analogues versus NPH; 2) compare previous insulin experience in patients; and 3) establish the number of patients changing treatment within one year. **METHODS:** The PHARMO database includes community pharmacy drug dispensing and hospitalisation records