as pellets was higher than those with other formulations. Patients starting with a patch demonstrated the highest switching rate compared to other formulations.

**PDB150**

**PATTERNS OF MEDICATION USE IN THE ONE YEAR FOLLOWING INITIATION OF DPP-4 INHIBITORS IN THE UNITED STATES**


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OBJECTIVES: DPP-4 inhibitors produce a modest improvement in HgbA1C with relatively few adverse effects. Little is known about the characteristics and treatment patterns of patients receiving DPP-4 inhibitors in the US. The objectives of the current study were to characterize patients prescribed DPP-4 inhibitors and examine patterns of anti-diabetic medication use in the one year following their initiation. **METHODS:** Data were obtained from Humedica’s National Electronic Health Record-Derived Longitudinal Patient-Level Database (2007-2011). The study cohort included patients with T2DM who received a first prescription for a DPP-4 inhibitor during the study period and who had at least one HgbA1C value at baseline. Baseline patient demographics, clinical characteristics and anti-diabetic medication use in the one-year follow-up period were assessed. Cox proportional hazards regression models were used to determine the outcome of switching or augmentation. **RESULTS:** Of the 8700 patients in the study cohort, 84% were older than 50, and 52% were female; the mean BMI was 34.4 and mean HgbA1C at baseline was 7.81. Overall, 2226 (25.6%) patients switched or augmented therapy within the first year following DPP-4 inhibitor initiation after a mean of 6.1 months; the most frequently observed patterns included a switch to another oral agent (n=1794, 20.6%) or to insulin (n=1006, 3.5%). Higher baseline HgbA1C (HR 1.20 [95% CI 1.14-1.26] for HgbA1C >9% vs. <7%) and higher BMI (HR 1.11 [95% CI 1.06-1.16] for BMI ≥30 vs. 25-29) predicted higher rates of switching; augmentation, while female gender (HR 0.92 [95% CI 0.89-0.95]) and younger age 0.42 (95% CI 0.22-0.81) predicted lower rates. **CONCLUSIONS:** In this US cohort, change in anti-diabetic treatment was relatively uncommon in the one year following initiation of a DPP-4 inhibitor. Baseline characteristics including HgbA1C, BMI and demographics can be used to inform the likelihood of switching or augmentation.

**PDB151**

**EVALUATION OF ASSOCIATION BETWEEN DIABETES RELATED QUALITY MEASURE ACHIEVEMENT AND DIABETES COMPLICATIONS IN A MEDICARE ADVANTAGE POPULATION**

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OBJECTIVES: Centers for Medicare and Medicaid Services (CMS) assess the performance of health insurance plans using quality of care measures. This study assessed the achievement of 8 diabetes-related quality measures at the patient level and examined whether achievement was associated with fewer complications. **METHODS:** Claims and member-level quality data between January 2010 and December 2011 were obtained from a Medicare Advantage Prescription Drug Insurance provider. Patients with type 1 or type 2 diabetes on the index date (January 1, 2011) and with 12 months of pre- and post-index continuous enrollment were included. Quality of care and diabetes complications were assessed within the post-index year. The impact of quality metric achievement on new or worsening diabetes complications was assessed with a logistic regression model, which adjusted for baseline characteristics. **RESULTS:** Cohort size ranged from 159,464 to 164,646. There was a strong positive association on the quality measure and patient-level diabetes complications. Most patients (>80%) achieved LDL-C screening, nephropathy assessment, and medication adherence standards. Over 95% of patients met dosing standards for biguanides, sulfonylureas, and thiazolidinediones. Eye screening and annual retinal examination was achieved by >90% of patients. Around 20% of patients received triple therapy (≥3 classes) within 30 days; 47% within 90 days of HgbA1c ≥9% index date, 7% between 91-180 days, 5% between 181-365 days, while 24% were >365 days. Around 20% of patients received insulin as a modification. Although the proportion of patients receiving triple therapy (≥3 classes) was still low (23%) at 12 months post-index, it increased from 10% at baseline. **CONCLUSIONS:** Many patients in poor control receive insufficient therapy as recommended by treatment guidelines. Even though additional agents were added for some patients, those receiving insulin or triple therapy were low. For patients with HbA1c >9%, prompt treatment intensification is needed to improve glycemic control and limit complications.

**PDB154**

**COST IMPLICATIONS OF EARLY DISCONTINUATION AND RESTART OF INSULIN IN THE TREATMENT OF TYPE 2 DIABETES MELLITUS**


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OBJECTIVES: This study examined different types of medical costs associated with early discontinuation (ED) of insulin therapy and with restarting of insulin among ED patients. Early discontinuation of insulin therapy was defined as patients with ≥3 months’ therapy that had stopped insulin therapy before the 3-month mark. **METHODS:** A secondary data analysis of the Truven Health Analytics Commercial Claims and Encounters database from 1/1/08 through 12/31/11 was utilized. ED was defined as discontinuation of insulin therapy for at least 30 days in the first 90 days post initiation. Cost analyses were performed with log-binomial regression models matched on age, gender, and at least ≥2 diabetes-related diagnoses to the incentive to continue insulin therapy. Costs were also examined. Analyses controlled for patient characteristics, index medication prescribed, patient general health, comorbidities, prior resource utilization, and prior medication utilization. **RESULTS:** Most (>82% of 74,399) individuals discontinued insulin therapy in the first year post initiation and 74% of these patients were ED. Compared to non-ED, ED was associated with 9.6% higher acute care costs (p<0.0003), while outpatient costs, diabetes-related drug costs, all-cause drug costs and total medical costs were all significantly lower among ED patients. Among the ED cohort, 50% restarted therapy over the post-period, with 53% restarting within 4 months. Compared to non-restart, the restart of insulin therapy after ED was associated with 11.3% higher acute care costs (p=0.003), 24% higher outpatient costs (p<0.001), 82% higher all-cause drug costs (p<0.001), and 30.3% higher total medical costs (p<0.001). **CONCLUSIONS:** Current findings suggest that during the first three months following initiation of insulin therapy for T2DM, the ED of insulin therapy and its restart are associated with higher acute care costs. Such costs are often considered avoidable or modifiable costs and tend to signal poorer long-term treatment outcomes.

**PDB155**

**NATIONAL PATTERNS IN PRESCRIPTION MEDICATION TREATMENT FOR DIABETES: 2002-2010**

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OBJECTIVES: To compare recent trends in treatment for diabetes between 2002 and 2010. **METHODS:** A cross-sectional study of expenditures was carried for representative sample of civilian, noninstitutionalized U.S individuals with diabetes from the Medical Expenditure (MEPS) 2002-2010. Expenditures include all sources of payment for oral anti-diabetic medications, insulin, and non-insulin injectables. We inflated 2002 dollar values to 2010 values using the consumer price index. **RESULTS:** From 2002 to 2010, the estimated number of persons reporting