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

**PD150**

**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 treat-

ment 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 hazard ratios were used for Hazard Ratios for outcomes 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=1,774, 20.6%) or to insulin (n=506, 5.9%). 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 0.92-0.95]) 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 ini-
tiation of a DPP-4 inhibitor. Baseline characteristics including HgbA1C, BMI and demographics can be used to inform the likelihood of switching or augmentation.

**PD151**

**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 impact of CMS diabetes 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 in 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 159,445 to 181,046. The impact of the treatment on the complication and quality measure and patient-level availability. Most patients (>80%) achieved LDL-C screening, nephropathy assessment, and medication adherence standards. Overall, 99% of patients met dosing standards for biguanides, sulfonylureas, and thiazolidinediones. Eye screening and anti-thrombotic treatments were available in 50% (30.3% and 9.4%, respectively) of patients. A majority (61%) of patients achieved Hba1c<9%; 29% of patients achieved LDL-C control <-100mg/dL. Logistic regression estimates showed that failure to reduce Hba1c below 9% statistically significantly increased the risk of new or worsening diabetes complications [OR, 1.12 (95% CI, 1.10-1.15); p<0.0001] as did failure to use anti-hypertensive treatment [OR, 1.40 (95% CI, 1.24-1.59); p<0.0001]. CONCLUSIONS: Data from a 1-year observation period sug-
gest that attainment of CMS diabetes quality metrics was associated with lower new or worsening complication risk. Since the full impact of improved care may not be properly assessed within such a short time, follow-up longitudinal studies would shed light on the long-term impact of achieving quality measures.

**PD152**

**A REGULATORY COMPARISON OF NON-INSULIN DEPENDENT TYPE II DIABETES DRUG APPROVALS IN THE UNITED STATES AND EUROPEAN UNION**

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OBJECTIVES: In 2012, Downing et al published a novel study in the NEJM that com-
pared the speed of regulatory agencies between 2001-2010, which demonstrated the FDA’s relative quickness. This paper narrows the scope to new non-insulin depend-
ent type II diabetes drugs approved by both the FDA and EMA (using the same websites) during 2005-2013, accounting for new drug approvals and legal updates to regulatory systems in a disease condition that has faced a plethora of regu-

latory challenges.

RESULTS: Unlike Downing’s study, this study looks at the European Medicine Agency’s (EMA) approval within 36 months of submission. All four decisions were made by the EMA and EMA as well as the approval date. The data consists of 12 non-insulin dependent

moeities approved between 2005 and 2013.

RESULTS: Out of the 12 new treatments, 10 were approved first by the FDA. Additionally, the FDA began reviewing the EMA with a median time of 26.5 days. The FDA additionally completed 8 of the 12 regulatory reviews faster than the EMA while beginning regulatory review first in each case. One of the four regulatory decisions in which the FDA was slower was outliers in terms of approval time. Additionally, when looking at the median, the FDA approved these moieties 77 days faster than the EMA while Downing’s findings only showed a 44-day differential. This was expected because the analysis included the FDA’s decision time, which in many cases is longer than the EMA’s.

CONCLUSIONS: While the FDA may be slower than the EMA in terms of approval time, when looking at the median, the FDA approved these moieties 77 days faster than the EMA while Downing’s findings only showed a 44-day differential. This was expected because the analysis included the FDA’s decision time, which in many cases is longer than the EMA’s.