Simulated estimations 1- and 3-year HbA1c progression for 1000 hypothetical T2DM patients (mean age 7 SE (5.3) years post-diagnosis) to obtain the proportion meeting criteria for ≤<7%, ≤<8%, ≤<9% thresholds by boosting the UK Prospective Diabetes Study (UKPDS) 68 equation. UKPDS68 accounts for time, HbA1c in the prior year, drug treatment effect, and baseline A1C. Parameter values for duration of diabetes, baseline HbA1c, and treatment effect were selected from distributions around the mean, and mean values of the latter two were systematically varied to approximate different populations and effects. RESULTS: By 1 year, all NCGA requirements are met when treating patients with ≤<7% average baseline HbA1c is ≤<8%. At 3 years, all requirements are met in patients with baseline HbA1c ≤<7%, though 8% and 9% threshold requirements are feasible with higher baseline HbA1c. Using a more realistic thiazolidinedione durability assumption (annual relapse HbA1c increase instead of UKPDS68, all thresholds are met at 1 year ≤<8% baseline HbA1c, and at 3 years ≤<7% 4% baseline HbA1c. The 7% and 8% requirements are met with ≤<8% baseline HbA1c at 1 year, at 3 years, 8% and 9% threshold requirements are met at baseline HbA1c ≤<8%. The simulations show that clinical thresholds can be met at 3 years, indicating that a new anti-diabetic strategy can be considered for treating an appropriate population from an ACO perspective.

PDB145

RELEVANCE OF CLINICAL TRIALS TO REPORTED HUMAN-INDUCED TRAFFICKING: DISPARITY BETWEEN HUMAN INDUCTION REQUIREMENTS AND PUBLISHED RCTS IN TYPE 2 DIABETES MELLITUS

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OBJECTIVES: To report the impact of anti-diabetic drug treatment on human induction requirements for type 2 diabetes mellitus (T2DM). METHODS: We conducted a systematic literature search for clinical trials reporting drug-induced human induction, defined as a significant change in A1C ≥7% or reducing A1C ≤7% from baseline. We selected 14 trials reporting results of drug-induced human induction, with 28.2% of the total population meeting the human induction requirement. The majority of trials (42.9%) evaluated induction in patients with diabetes duration ≤2 years, with the remainder evaluated in patients with diabetes duration ≥5 years. CONCLUSIONS: Drug-induced human induction is a significant issue for diabetes patients, with the majority of trials evaluating drug-induced induction in patients with diabetes duration ≤2 years. The findings from this study suggest that drug-induced human induction is a significant issue for diabetes patients, with the majority of trials evaluating drug-induced induction in patients with diabetes duration ≤2 years.
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 comprised patients with ≥2 claims 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 ratio (HR) was used to determine the predictors of 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=1791, 20.6%) or to insulin (n=306, 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 PERFORMANCE 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 how 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 159,451 (type 1 diabetes [T1D]) to 464,617 (type 2 diabetes [T2D]) on the treatment date. Outcomes included the quality measures and patient-level diabetes complication risk. Most patients (>80%) achieved LDL-C screening, nephropathy assessment, and medication adherence standards. Over 99% of patients met dosing standards for biguanides, sulfonylureas, and thiazolidinediones. Eye screening and use of and medication adherence standards. Over 99% of patients met dosing standards for new or worsening diabetes complications (OR, 1.12 (95% CI, 1.10-1.15); P<0.0001) as did failure to control HgbA1c below 9% (p<0.0001) as did failure to use anti-hypertensive treatment (OR, 1.40, [95% CI, 1.24-1.59]).

CONCLUSIONS: Data from a 1-year observation period suggest that attainment of CMS diabetes quality metrics was associated with lower risk of new or worsening complication risk. Since the full impact of improved care may not be observed until the 36-months post-index period.

PDB152
A REGULATORY COMPARISON OF NON-INSULIN DEPENDENT TYPE II DIABETES DRUG APPROVALS IN THE UNITED STATES AND EUROPEAN UNION

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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 patients with diabetes from the Medical Expenditure Panel Survey (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...