tient age, sex, number of pre-index antidiabetic medications (1.9±0.9, pre-index HbA1c (8.2±1.5%), or Charlson Comorbidity Index (0.45±0.78, all p>0.5). Mean (SD) ADD was 16.7 mg/cL (±9.22, label range 10-20 mg/cL) for exenatide patients and 1.43 mg (±0.69, label range 0.6-1.8 mg/cL) for liraglutide patients. Among patients with post-index values did not differ (7.9, 8.2±1.5%, all p>0.05). Early adopters were more likely than liraglutide patients to continue pre-index anti-diabetic medications (67.1% vs. 60.3%, p=0.027) or to start concomitant anti-diabetic medications at index (32.2% vs. 25.6%, p<0.013), however, exenatide patients were less likely to augment treatment post-index (15.8% vs. 22.6%, p<0.027). Post-index, 9.3% exenatide and 10% liraglutide patients discontinue GLP-1 therapy (p>0.5). CONCLUSIONS: Results suggest that some differences exist between German patients initiating exenatide or liraglutide, with respect to prescribing physician specialty, pre- and post-index treatment patterns, and ADD. Both GLP-1s show comparable post-index HbA1c.

PDB70

BASELINE CHARACTERISTICS AND ANTIDIABETIC EXPOSURE IN PATIENTS WITH TYPE-2 DIABETES TREATED WITH LIRAGLUTIDE

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OBJECTIVES: This study describes baseline characteristics and prior antidiabetic therapy of patients in an electronic medical record (EMR) prescribed liraglutide, a once-daily GLP-1 agonist, relative to non-liraglutide patients. METHODS: Adults (>18 years) with T2DM, a new prescription for liraglutide from 3/10/2010 to 7/16/2010 (index date), and EMR activity ≤395 days pre-index to >1 day post-index were identified. Demographics, comorbidities, and pre-index antidiabetic prescriptions orders were compared within and between cohorts. RESULTS: With T2DM, >11% of the diabetic order from 1/1/2010 to 7/16/2010 (index date), and EMR activity ≤395 days pre-index to >1 day post-index. Bootstrapping was used to provide robust mean (95% CI) estimates for comparison patients due to sample size (n=24,792). RESULTS: Of 116,162 liraglutide prescriptions, 58.8% were female and mean (95% CI) age was 55.5 (54.9, 56.0) years vs. 53.0% female and 60.9 (60.1, 61.6) years for comparison patients. For liraglutide vs. comparison patients, mean baseline HbA1c was 8.1% (8.0, 8.2) vs. 7.6% (7.5, 7.8), BMI was 38.3 kg/m2 (37.8, 38.8) vs. 34.1 kg/m2 (33.5, 34.6), body weight was 109.5 kg (108.6, 110.6) vs. 115.1 kg (115.0, 115.3), all p<0.001. Comorbidities in liraglutide vs. comparison patients included dyslipidemia (87.1% vs. 79.2%), hypertension (73.6% vs. 73.8%), and cardiovascular disease (18.2% vs. 22.4%). Of liraglutide patients, 5.6% were antidiabetic drug naive pre-index vs. 42.0% of comparison patients. The most common antidiabetic prescriptions at the time pre-index were metformin and sulfonylureas, respectively, for liraglutide (64.5%, 37.5%) and comparison (28.7% vs. 19.6%) patients, followed by insulin (33.8% liraglutide vs. 19.6% comparison). Pre-index orders for multiple antidiabetics occurred in 75.6% of liraglutide and 22.5% of comparison patients (p<0.01 for all comparisons except hypertension p>0.05). CONCLUSIONS: Early data suggest that liraglutide is being utilized in very obese patients who failed to achieve HbA1c goal on other antidiabetic. Longitudinal research is warranted to assess liraglutide outcomes and changes in antidiabetics post-liraglutide.

PDB71

CHARACTERISTICS OF EARLY ADOPTERS OF EXPENSIVE MEDICATIONS

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OBJECTIVES: To examine characteristics of physicians who are early adopters of new expensive medications. METHODS: RETROSPECTIVE analysis of pharmacy claims from 2006-2010 for 3 expensive diabetes drugs (exenatide, saxagliptin, and sitagliptin) identified by medical directors and pharmacists at large health plan in Hawaii. We examined how physician specialty and urban setting affected likelihood of being an early prescriber. We calculated total paid costs and days supply by quarter for the year 2004, from CMS (the Centers for Medicare and Medicaid Services) chronic condition data warehouse. In this study, the RXMATCH function, summary statistics and 0-1 indicator functions are used to generate the predictor variables, heart disease, kidney disease, neurologic disorder, ocular disease and hypertension. The generalized linear mixed model was employed for the analysis of interaction effects of complications on Medicare payments and length of stay (LOS). The Poisson regression model is applied to analyze the effects on the frequency of claims. The logistic regression model is utilized to study the effects on mortality. RESULTS: Results demonstrate that several conditions such as heart disease and eye disease, heart disease and hypertension are significant to costs and LOS. The effects between kidney disease and cardiovascular disease are significant in the Poisson regression model. The interaction effect between renal disease and cardiovascular disease is significant to mortality. After the study, we can conclude that for inpatients with other diabetes complications, there are differences in health costs and health outcomes between the inpatients who have cardiovascular disease and those who do not have. There also exist big differences in outcomes between the patients who have renal disease and those who do not have.

PDB73

A CLAIMS-BASED EMPIRIC APPROACH TO ASSESSING MEDICATION POSSESSION FOR PATIENTS INITIATING THERAPY WITH INSULINS

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OBJECTIVES: An important challenge addressing researchers studying adherence among insulin-requiring patients with diabetes is the discrepancy between the prescription sale (POS) entered days supply and the actual time of medication possession. Significant deviation between these two can result in misleading medication possession ratio (MPR) estimates, especially in cases where the quantity dispensed is known to differ significantly, as is the case with insulin detemir delivered in a 15ml FlexPen® (IDetFP) pack versus the Neilite insulin delivered in a 10ml vial. This research expands upon an approach used by Klienman et al., and suggests an alternative measure of medication possession for insulin. METHODS: Data were gathered from a large US national payer retrospective claims database, and included only patients ≥18 years of age with type 2 diabetes that had ≥2 retail pharmacy fills of IDetFP or NPH vial in a 12-month observation period. Patients with claims for any other insulin, other than the index insulin during the 12-month observation period, were excluded. Median empirically-derived days supply (EDDS) estimates, based on median time-to-next-refill intervals, and POS entered days supplies were compared within and between cohorts. RESULTS: Median EDDS and POS days supply were identical for both the IDetFP and NPH cohorts, 30.00 days for both, however, median EDDS were significantly different between IDet and NPH cohorts, 45.00 vs. 36.00, respectively (p<0.001). In addition, within-group comparisons of POS days supply and EDDS in both cohorts revealed significant differences (p<0.001 for both tests). CONCLUSIONS: Drawing meaningful conclusions about adherence with insulins using pharmacy claims remains a significant challenge. Our analysis demonstrates that POS days supply entries, commonly used for adherence analysis, may deviate substantially and significantly from EDDS estimates. This study explores a novel, alternative, and empirically-based approach to determining medication possession. Research to further refine this and suggest other alternative methods should be encouraged.

PDB74

BETA-VERIFICATION OF A DIABETES MODELING FRAMEWORK AGAINST PUBLISHED COHORT TRIALS

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OBJECTIVES: To perform a beta-verification of a novel diabetes modeling and analysis framework (DMFA) designed to accommodate growing demand for analysis of ever-shifting special subpopulations, new interventions, and updated care algorithms. A Monte Carlo simulation model assumed standard oral and subsequent insulin therapy generated mean outcomes as defined by recently published trials: 1) ACCORD-BPPLI; 2) ACCORD-GLI; 3) ASPEN; and 4) ADVANCE. METHODS: Diabetes is increasing in prevalence, and its 20-year history of diabetes care has paralleled that of care. Increased prevalence in definitions and suitability for modeling. This study explores a novel, alternative, and empirically-based approach to determining medication possession. Research to further refine this and suggest other alternative methods should be encouraged.

PDB75

DIABETES/ENDOCRINE DISORDERS – RESEARCH ON METHODS

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OBJECTIVES: The purpose of this project is to investigate the interaction effects of diabetes complications on Medicare expenditures, length of hospitalization, claim frequency and mortality of diabetes inpatients in the Medicare population. METHODS: The analysis is based on inpatient claims data with 244,299 records for the year 2004, from CMS (the Centers for Medicare and Medicaid Services) chronic condition data warehouse. In this study, the RXMATCH function, summary statistics and 0-1 indicator functions are used to generate the predictor variables, heart disease, kidney disease, neurologic disorder, ocular disease and hypertension. The generalized linear mixed model was employed for the analysis of interaction effects of complications on Medicare payments and length of stay (LOS). The Poisson regression model is applied to analyze the effects on the frequency of claims. The logistic regression model is utilized to study the effects on mortality. RESULTS: Results demonstrate that several conditions such as heart disease and eye disease, heart disease and hypertension are significant to costs and LOS. The effects between kidney disease and cardiovascular disease are significant in the Poisson regression model. The interaction effect between renal disease and cardiovascular disease is significant to mortality. After the study, we can conclude that for inpatients with other diabetes complications, there are differences in health costs and health outcomes between the inpatients who have cardiovascular disease and those who do not have. There also exist big differences in outcomes between the patients who have renal disease and those who do not have.