association between average costs and rate of SU use was not significant. Other therapy classes were associated with increased costs with the exception of premixed insulin, meglitinides and amylinomimetics (no significant association) and biguanides and alpha glucosidase inhibitors (negative association). **CONCLUSIONS:** Use of SU could potentially increase complications in type 2 diabetes.

PDB98

A LONGITUDINAL EVALUATION OF DIABETES MANAGEMENT IN COMMERCIALLY INSURED PATIENTS IN THE UNITED STATES

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OBJECTIVES: Many patients on antidiabetics do not reach the ADA-recommended A1c level (<7%). This cross-sectional epidemiologic study evaluated A1c levels and diabetes-related complications among commercially insured US patients receiving antidiabetics. **METHODS:** Patients aged ≥18 years, diagnosed with T2DM, with ≥1 oral antidiabetic or insulin fill and continuous pharmacy and medical health plan enrollment for 2008, 2009, 2010, or 2011 were selected from the HealthCore Integrated Research Database℠, an integrated claims dataset representing a large national health insurer. Characteristics and outcomes were assessed descriptively. **RESULTS:** We identified 265,411 patients for 2008, 266,104 for 2009, 264,220 for 2010 and 229,079 for 2011. Electronic A1c lab results were available for 22.2% of patients. In 2008 48.2% of patients had an A1c <7%; the percentage of patients achieving this target decreased through 2011 with only 44.5% achieving an A1c <7%. The percentage of patients with an A1c ≥9% increased from 15.3% in 2008 to 17.7% in 2011. Mean A1c was 7.47, 7.55, 7.50, and 7.62 for the years 2008, 2009, 2010, and 2011, respectively. An analysis of the 2011 population revealed that patients with an A1c <7% were less likely to have neuropathy (7.1% vs.10.5%), retinopathy (8.0% vs. 12.3%), or amputations/ulcerations (1.6% vs. 2.7%), compared to patients with an A1c ≥7% (P<0.001 for each). The 2011 average A1c for patients with versus without neuropathy was 7.97 versus 7.59; for retinopathy, 7.89 versus 7.59; and for amputation/ulceration, 8.13 versus 7.61. **CONCLUSIONS:** These results suggest that diabetes management in the US over the past four years has worsened in this sample of commercially insured patients, with potentially adverse cost consequences. Diabetes-related complications were more common in patients with worse diabetes control. As more than half of patients had A1c levels above the ADA recommendation, the study highlights the unmet need for improved glycemic control.

PDB99

PERSPECTIVES ON COMPLEMENTARY DATA SOURCES IN DIABETES HEALTH TECHNOLOGY ASSESSMENT: AN ENROLLING PRACTICE-BASED RESEARCH NETWORK AND A LARGE COMMERCIAL HEALTH PLAN

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OBJECTIVES: Diabetes FORWARD (DF) is a practice-based research network (PBRN) focused on Type-2 Diabetes (T2DM) health technology assessment (HTA) and health services research (HSR) in North America, based in primary care practices with electronic medical records (EMR) and enriched with supplementary patient- and provider-reported information. Recruitment is currently 9% of goal, with interest in early evaluations of how the DF source population might relate to other T2DM populations. **METHODS:** Eligible patients are adults with T2DM receiving pharmacotherapy, and other criteria previously reported. We examined the T2DM cohort of the DF-EMR, the DF population enrolled between March and September 2012 (DF), and members with continuous enrollment through 2011 in a large commercial health plan (LHP). We reviewed preliminary descriptive information to inform future analyses of patient subgroups and outcomes among populations in these data sources. **RESULTS:** DF-EMR source population (n=187,991) and DF patients (n=935) varied from LHP (n=719,041) in ways to be expected from sources created for different purposes. DF-EMR and DF had slightly greater proportions of males versus LHP, respectively (48.1 and 43.6 vs. 54.2%), and a US geographic distribution skewed toward the South (62.6 and 68.4 vs 42.0%). Insurance types reflected the nature of the data sources: Commercial, 51.1 and 47.4 versus 87.2%; Medicare, 41.9 and 39.8 versus 6.1%; and Medicaid, 1.5 and 7.7 versus 0.3%. The DF population had slightly greater prevalence of insulin (18.6 vs. 17.3%) and oral antidiabetic drug (OAD) use versus LHP, reflecting the DF pharmacotherapy criterion: No OAD, 7.4 versus 45.7%; 1 OAD, 43.1 versus 27.6%; 2 OAD, 37.4 versus 18.2%; 3 or more OAD, 12.1 versus 8.2%. **CONCLUSIONS:** HTA and HSR require complementary data sources to translate findings into improved outcomes across patients and settings. This descriptive assessment begins to investigate the potential applicability of findings across populations from such important complementary data sources.

PDB100

A FOCUS ON REAL LIFE DATA CONCERNING ANTIDIABETIC DRUGS: THE EXPERIENCE OF AIFA MONITORING REGISTRY

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OBJECTIVES: Type-2 diabetes is the most common metabolic disease in Italy and in developed countries. It is the sixth leading chronic disease by diffusion with a crude prevalence of 4.9%. It is estimated that about 3,000,000 Italians suffer from this pathology. In the last decade, the new class of incretin-based therapies entered the arena, but their place in therapy remains difficult to determine because of limited long-term clinical data on both effectiveness and safety, and the high cost of therapy. Both injectable glucagon-like peptide1(GLP-1) receptor agonists (incretin-mimetics) and orally-administered inhibitors of dypeptidylpeptidase-4(DPP-4) produce a significant improvement in glycemic control especially when combined with metformin, similar to other second-line therapies, but additional advantages with respect to weight gain and overall hypoglycemia. In 2008 AIFA established a Monitoring Registry through which collecting and monitoring the safety and the efficacy profiles of new antidiabetic drugs. **METHODS:** Data collected from the Monitoring Registry from 2008 to 2011 were analyzed. An estimation of population enrolled, NHS-expenditures and median cost for patients were calculated for the antidiabetic drugs which entered in the Registry. **RESULTS:** AIFA Antidiabetic Monitoring Registry enrolled 135,954 patients for the period of observation. 79,211 patients (58%) were treated with DPP-4 (saxagliptin, vildagliptin and sitagliptin associated or not with metformin) and 56,743 patients (42%) with GLP-1 analogous (liraglutide and exenatide) with an economic NHS burden on Registry respectively equal to €34,675,414 (55%) and €28,649,091 (45%). The daily mean cost per patient related to the drugs included in the Registry was around €3. **CONCLUSIONS:** The safety and efficacy profiles of drugs monitored in the Italian real-world clinical practice are similar to those recorded during phase 2-3 registration clinical trials. Data collected through Registry allows performing a cost-effectiveness analysis and a cost-impact for NHS comparing both the monitored drugs among them and the other therapeutic treatments

PDB101

PATIENT CHARACTERISTICS, ANTIDIABETIC MEDICATION USE, AND GLYCEMIC CONTROL IN DIABETIC NURSING HOME RESIDENTS WITH MODERATE TO SEVERE CHRONIC KIDNEY DISEASE

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OBJECTIVES: To describe the demographic and clinical characteristics, antidiabetic medication use and glycemic control among diabetic nursing home (NH) residents with moderate to severe chronic kidney disease (CKD). **METHODS:** Long term care administrative data with linked clinical and functional assessments, demographic information, laboratory results and pharmacy claims were analyzed. Residents with diabetes who remained in NHs for at least 90 consecutive days in 2008-2011 and had at least one estimated glomerular filtration rate (eGFR) test and one glycated hemoglobin (HbA1c) test within 1 year of the continuous stay were selected. Residents with moderate to severe CKD were identified if they had an eGFR less than 60 mL/min/1.73m^2. Resident demographic characteristics, comorbidities, and functional status were summarized. Use of antidiabetic medications was assessed for the first 90-day period of the continuous NH stay. Proportion with glycemic control was also assessed. **RESULTS:** Of the 1005 long-stay diabetic NH residents, 338 (33.6%) had moderate to severe CKD. CKD residents were on average 74.4 ± 11.1 years old and majority of them were females (59.8%). Common comorbidities included hypertension (93.2%), depression (77.8%) and anemia (56.2%). 72.8% of the residents were receiving ≥9 medications. Less than half (42.0%) of the residents received oral antidiabetic drugs (OAD) or glucagon-like peptide-1 agonist, and a higher proportion received insulin (61.8%). The most commonly used OAD was sulfonylurea (22.2%), followed by metformin (13.3%). The average HbA1c was 7.0% ± 1.5; 59.8% had HbA1c<7%, 19.2% had HbA1c >7% and ≤8%, 11.8% had HbA1c >8% and ≤9%, and 9.2% had HbA1c>9%. **CONCLUSIONS:** The prevalence of moderate or severe CKD is high in long-stay diabetic nursing home residents. Less than two thirds of the residents with CKD had glycemic control. Medication therapy management to achieve better glycemic control should be considered for NH residents particularly among those with CKD.

PDB102

ASSOCIATION OF SEVERE HYPOGLYCEMIC EVENTS AND HOSPITAL READMISSION WITH TREATMENT NON-CONCORDANCE TO GUIDELINES AND PRESCRIBING INFORMATION IN HOSPITALIZED PATIENTS WITH TYPE-2 DIABETES AND STAGE 3-5 CHRONIC KIDNEY DISEASE

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OBJECTIVES: To assess the association between non-concordant use of oral anti-diabetic drug treatment (OAD) according to National Kidney Foundation (NKF) guidelines and prescribing information (PI) and severe hypoglycemic events and hospital re-admission in hospitalized type 2 diabetes mellitus (T2DM) patients with stage 3-5 chronic kidney disease (CKD). **METHODS:** This study analyzed electronic health records from integrated health systems across the U.S. Adult T2DM patients with stage 3-5 CKD, who were hospitalized between 2008 and 2011, were identified from medical diagnoses, dialysis procedures, or laboratory findings. OADs prescribed on the discharge date were evaluated and considered not concordant if any were not prescribed according to NKF guidelines or PI. Separate Cox-proportional hazards models were used to evaluate the associations of NKF and PI non-concordance with re-admission and severe hypoglycemic events controlling for patient demographic and clinical characteristics, respectively. **RESULTS:** A total of 1712 patients (mean age: 68.4; 50.5% female; 69.6% stage-3 CKD) met the criteria for NKF guidelines evaluation and 1552 patients (mean age: 68.2; 50.5% female; 70.6% stage-3 CKD) for PI evaluation. The non-concordance rate was 36.4% for NKF and 71.8% for PI. After adjusting for patient characteristics, patients who were not concordant to PI were more likely to have severe hypoglycemic events (HR: 1.62, 95 % CI: 1.11-2.37) and re-admission (HR: 1.36, 95 % CI: 1.16-1.61) after being discharged. On the other hand, we did not find any statistically significant associations between non-NKF-concordance with severe hypoglycemic events (HR: 1.29, 95% CI: 0.98-