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(P values <0.001) in the proportion of adherent patients (1 year - saxagliptin: 49.1% vs. sitagliptin: 46.1%; 2 years – 41.5% vs. 39.3%) and the proportion of patients who discontinued (1 year – 43.4% vs. 46.4%; 2 years – 58.9% vs. 61.3%). Comparing saxagliptin with sitagliptin, the adjusted odds ratio of being adherent during 1 year was 1.21 (95% confidence interval: 1.16 –1.27) and during 2 years was 1.09 (1.01 –1.18). The adjusted hazard ratio of discontinuing saxagliptin during 1 year was 0.86 (0.84 –0.89) and during 2 years was 0.90 (0.86 –0.94) compared with sitagliptin. **CONCLUSIONS:** Among US adults with T2DM, saxagliptin was associated with greater adherence and persistence, compared with sitagliptin. This research was funded by Bristol Myers Squibb and Astra Zeneca.

PDB92
PERSISTENCE OF TESTOSTERONE REPLACEMENT THERAPY (TRT) IN THE UNITED STATES

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OBJECTIVES: To evaluate medication persistence with testosterone replacement therapy (TRT) in a US commercially-insured population. **METHODS:** This was a retrospective claims database study using the MarketScan® Commercial database from January 2005 through December 2011. The study included men aged 18-65 years who initiated TRT and were diagnosed with hypogonadism or hypogonadotropic hypogonadism (ICD-9-CM: 257.3 and 257.4). Subjects were required to have a minimum of 6 months continuous enrollment before and after the TRT index date. The main outcome was the percentage of patients who remained persistent with their index therapy, and estimated using the product-limit method. **RESULTS:** Of 441,837 patients who had ≥1 TRT prescription claims during the study period, 140,098 patients met all the inclusion and exclusion criteria. The mean age of the study population was 49.9 years (SD, 9.3 years). Most patients started with gels (54.1%), followed by short-acting injections (SAIs) (39%), patch (6%) and others (pellets or buccal) (0.9%), respectively. Persistence with any TRT decreased substantially over the 36-month study period. About half of the patients were persistent with their TRT at 4 months while 36.9% and 24.4% of patients persisted at 6 and 12 months, respectively. The percentage of patients who stayed on therapy decreased to 13.6% (24 months) and 8.9% (36 months), respectively. For the analysis of persistence by formulation at 12 months, about a quarter of those receiving either gels or pellets remained on their initial therapy compared to 17.1% and 7.8% for SAIs and patch, respectively. **CONCLUSIONS:** This study showed that the persistence with testosterone replacement therapy among US patients decreased substantially over time. Treatment with long-acting formulations may help improving medication persistence to derive long-term benefit from the therapy.

PDB93
PERFORMANCE OF THE NATIONAL QUALITY FORUM DIABETES ADHERENCE MEASURE IN THE MISSISSIPPI MEDICAID POPULATION

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OBJECTIVES: The National Quality Forum is a public organization that reviews, endorses, and recommends use of standardized health care quality measures, which are considered the gold standard in the United States. The NQF endorses a measure concerning medication adherence in patients with diabetes using sulfonylureas, thiazolidinediones or metformin. This study tests the performance of the diabetes adherence quality measure in the Mississippi Medicaid population. **METHODS:** Mississippi Medicaid administrative claims for calendar years 2008 to 2012 were used to assess the measure in the Mississippi Medicaid fee-for-service population. Eligible beneficiaries were at least 18 years of age, received at least two prescriptions in a specific therapeutic category and did not have any claims for insulin in the measurement period. The patient´s measurement period was defined as the period from the index prescription date to the end of the calendar year, disenrollment, or death. Adherence was defined as the number of covered days divided by total number of days in the measurement period. **RESULTS:** The study population included had a higher proportion of females (approximately 75%), African-Americans (around 64%) and elderly (approximately 50%). Adherence to Sulfonylureas, Thiazolidinediones and Metformin was approximately 38%, 41% and 39% respectively in 2008. These numbers decreased steadily to about 26%, 35% and 26% respectively in 2012. **CONCLUSIONS:** Adherence to diabetes medications has been decreasing in the past few years. While this might reflect a need for greater adherence interventions, it is possible that these numbers are being caused by patients who are steadily moving from the fee-for-service plan to the managed care plan in Mississippi Medicaid. Nevertheless, adherence to diabetes medications is of critical importance to measuring quality of health care delivered. This study provides a valuable first look at the performance of this quality measure over several years in a Medicaid population.

PDB94
ADHERENCE BARRIERS TO ACE-IS AND ARBS AMONG NON-ADHERENT HYPERTENSIVE PATIENTS WITH DIABETES ENROLLED IN A MEDICARE ADVANTAGE PLAN

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OBJECTIVES: To identify main adherence barriers to ACE-Is/ARBs among non-adherent hypertensive diabetic patients enrolled in a Texas-based Medicare Advantage plan through a pharmacist telephone intervention. **METHODS:** Subjects were members of a Medicare prescription drug plan in Texas. Medical claims data was used to identify patients who were diagnosed with hypertension and diabetes with at least 2 fills for ACE-Is or ARBs therapy January/2013- October/2013. Patients who failed to refill their medication for more than one day, and had a PDC<0.8 were considered non-adherent and contacted by a pharmacist to identify the adherence barrier(s). Pharmacy claims data included information on demographics (age, gender, language), prescriber/pharmacy information, and health plan information (health plan name, income subsidy status). Descriptive analyses and chi-square tests were conducted to assess frequency distributions of the main adherence barriers identified and their association with patients' age, gender, income status, language and prescribers' specialty. **RESULTS:** Sample consisted of 87 hypertensive diabetic patients, non-adherent to ACE-Is/ARBs who received the pharmacist phone call. Among these patients, forgetfulness (25.29%) and doctor issue, like having difficulty scheduling appointments, (16.79%) were the most commonly reported barriers. Other barriers identified included fear of adverse events (6.90%), cost and alternative source/insurance (5.75%), patient perception of disease and treatment (5.75%), dose reduction (5.75%), pharmacy related issue (3.45%), patient denial (2.30%), lost medication (1.15%), interruption (admission) (1.15%), transportation issues (1.15%), and no specified reason (2.30%). Chi-square test results were statistically insignificant (P>0.05), thus indicating that these barriers didn't vary across patients' age, gender, language, income and prescribers' specialty. **CONCLUSIONS:** Forgetfulness was the most commonly cited reason for non-adherence. Other barriers included doctor issue, fear of adverse events, cost, patient perception and dose reduction. Future interventions aimed at improving adherence among this high risk population should incorporate and address these identified barriers. KEYWORDS: Adherence, Intervention, ACEI/ARBs, Diabetes, Hypertension.

PDB95
DEVELOPING A BEHAVIORAL FRAMEWORK FOR COST-RELATED MEDICATION NON-COMPLIANCE AMONG OLDER DIABETES PATIENTS

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OBJECTIVES: Up to one third of older patients report cost-related medication non-adherence (CRMN). Diabetes is a costly chronic condition affecting 26 million Americans. There is an increasing recognition of the importance of CRMN in patients with diabetes. A behavioral framework for the factors influencing CRNM is needed to understand CRMN and design interventions. We aimed to develop a behavioral framework for CRMN among older diabetes patients. **METHODS:** We conceptualized four dimensions of factors that may influence the CRMN in older diabetes patients: institutionalization, insurance coverage, diversity of drug utilization, and patient's functional status. We used data from the 2010 Health and Retirement Study to assess those four dimensions. CRMN was self-reported. We conducted multivariate regression analysis to assess the effects of these potential risk factors. **RESULTS:** 875/4,880 (18%) of diabetes patients reported CRMN. In terms of institutionalization, patients residing in nursing home were 66% (p=0.01) less likely to report CRMN; and having any number of hospitalizations increased the risk of CRMN (p<0.01). In terms of insurance coverage, those at the pre-Medicare coverage aged 50-64 years were 118% more likely to report CRMN compared to respondents who were age 65-74 (p<0.01), and those with Medicaid were 66% less likely to report CRMN. In terms of drug utilization, patients using medication for asthma were 30% more likely to report CRMN (p<0.01). In terms of functional status, patients with 1 or more limitations in activity of daily living or instrumental activities of daily living were much more likely to report CRMN (both p<0.01). **CONCLUSIONS:** Patients' CRMN is influenced by a range of factors. Interventions to reduce CRMN should target these factors and use these factors in identifying the target population for interventions.

PDB96
PERSISTENCE RATE AND ADHERENCE LEVEL TO ORAL ANTIDIABETICS AND THEIR ASSOCIATED DETERMINANTS

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OBJECTIVES: To evaluate the persistence rate and adherence level of new oral antidiabetics (OAD) users as well as their relation to patients' demographic and clinical characteristics. **METHODS:** A cohort of 160,231 patients was built from prescription records in the Régie de l'assurance maladie du Québec administrative database. All patients aged 45-85 years old who received at least one OAD prescription between January 2000 and October 2009 were included. New users were defined as having no OAD prescribed in the 2 years preceding cohort entry. The cohort entry was defined by the date of the first OAD prescription. Persistence rate was defined by allowing a 50% grace period for renewal. Drug adherence level was estimated using MPR. The cumulative persistence rate was estimated using a Kaplan-Meier analysis. Cox regression models were used to estimate the rate ratio of ceasing OAD after adjustment. Logistic regression models were used to establish the relation between non-adherence level and their determinants. **RESULTS:** Patients had a mean age of 67 years, 49% were men, 52% had a cardiovascular disease, 78% had hypertension and 59% had dyslipidemia. Persistence decreased to 51% after 1 year but the proportion of patients who refilled an OAD during the year after cessation ranged from 73 to 91%. Adherent patients (MPR ≥ 80%) accounted for 67% after 1 year. Hypertension (0.84-0.87), dyslipidemia (0.85-0.88) and cerebrovascular disease (0.89-0.99) were associated with higher persistence rates, whereas microvascular risk factors such as urologic procedure (1.01-1.17) and viral infectious diseases (1.09-1.27) demonstrated lower rates. Similar results were observed for adherence. **CONCLUSIONS:** Barriers to persistence rate and adherence level occur early in the course of OAD therapy. Adherence is a key factor in determining the success of various therapeutic approaches, thus greater attention should be paid to this aspect which may result in improved patient outcome.

PDB97
PEN NEEDLE LENGTH AND PERSISTENCE AMONG INSULIN PEN USERS WITH TYPE 2 DIABETES MELLITUS

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OBJECTIVES: To assess the impact of insulin pen needle (PN) length on persistence of prescribed insulin therapy among patients recently diagnosed with type 2