by the price reduction ("targeted") or not ("non-targeted"). We used an interrupted time series design and regression models to estimate the monthly change in OTC/DPI sales volume and expenditures following the policy. RESULTS: A total of 72.6% (130/179) of products were targeted by the policy. Biguanides, sulfonylureas, alpha-glucosidase inhibitors, and thiazolidinediones accounted for 96.8% of oral antidiabetic volume and 93.3% of expenditures. After the policy, there were reductions in the volume trend (−3.04 DDD/patient/month, 95%CI [−4.98 to −1.10]) and expenditure trend (−61.76 NT$/patient/month, [−75.00, −48.51]) of targeted medications. Growth in the market volume and expenditures for non-targeted products were with no notable changes following the policy. Effects differed for drug groups of targeted biguanides, while reductions for non-targeted biguanides fell by 167 NT$/patient immediately after the policy, use of targeted sulfonylureas and expenditures also reduced (−2.39 DDD/patient/month [−3.00, −1.78]; 204 NT$/patient immediately after the policy); and use of targeted thiazolidinediones decreased (−0.58 DDD/patient/month [−1.0, −0.2]). In contrast, use and expenditures for non-targeted biguanides and alpha-glucosidase inhibitors increased, while non-targeted sulfonylureas remained stable. CONCLUSIONS: Overall, the price reduction policy resulted in lower use and expenditures for targeted oral antidiabetic medications, but reductions in market growth for several classes of targeted products and increases in use of non-targeted products. Our results suggest that the price reduction impacts may differ among specific anti-diabetic drug groups.

PDB94 THE TREND OF INFLUENZA AND PNEUMOCOCCAL VACCINATION AMONG ADULTS WITH DIABETES IN THE UNITED STATES, 2006-2010

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OBJECTIVES: Individuals with diabetes are particularly susceptible to influenza and pneumonia infection. They are recommended to receive annual influenza vaccination during flu season and at least one pneumonia shot during lifetime. The Healthy People 2010 Initiative set a goal of vaccinating 90% of those diabetic adults over 65 years old and 60% among diabetic patients less than 65 years of age. Vaccination coverage among diabetic adults in the United States, however, is understudied. METHODS: We analyzed the 2006-2010 National Health Interview Survey (NHIS) data to 1) estimate the influenza and pneumococcal vaccine coverage rates among adults with diabetes over the 5-year study period adjusting for weights, and 2) identify factors that are potentially associated with both vaccinations among this population using multiple logistic regression. RESULTS: Among diabetic adults aged 18 to 64 years old, both influenza and pneumonia vaccination coverage decreased in 2007 and increased steadily from 2008 (weighted estimates: 47.5% for influenza and 32.2% for pneumonia) to 2010 (weighted estimates: 53.4% for influenza and 42.6% for pneumonia). For those aged 65 years old or older, influenza vaccination coverage was relatively stable from 2006 to 2009 but reduced in 2010. Pneumonia vaccination rates did not vary much from 2006 to 2010. Overall, both coverage levels were substantially higher among the aged group. Factors that positively associated with vaccination were 65 years or older, high school education or greater, and vaccination in the last 12 months. CONCLUSIONS: The influenza and pneumonia vaccination coverage increased marginally among adults with diabetes from 2006 to 2010. To achieve the objective of Healthy People 2010 had not achieved yet. Special efforts could be implemented to enhance both vaccine coverage among diabetic adults.

PDB95 A DESCRIPTIVE STUDY OF OPIOID USE IN THE MANAGEMENT OF DIABETIC PERIPHERAL NEUROPATHY (DPN) IN A LARGE COMMERCIALLY INSURED POPULATION

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OBJECTIVES: Opioid use has grown over the last decade and neuropathy and diabetic peripheral neuropathy (DPN) guidelines do not recommend opioids as first line treatment. This study sought to examine the proportion of DPN patients who are prescribed opioids and to determine the proportion of DPN patients who are prescribed opioids as first line treatment. METHODS: A 10% sample of IMS-LifeLink claims data from 1998 through 2008 were used. The study population consisted of patients with ≥1 diagnosis for diabetes and/or ≥1 claim for an antidiabetic prescription. DPN patients were identified with a validated DPN identification algorithm from the date of diagnosis or a DPN diagnosis service date during the index date. All patients were required to have continuous 12 month pre- and post index date plan enrollment and be ≥17 years of age. Patients with cancer, non-cancer pain conditions, surgery in the pre- and post- 12 month index period, and with opioid use in the pre-index period were excluded. Descriptive statistics were used to investigate demographic, Charlson-comorbidities, with first line use of DPN related medications were calculated. RESULTS: A total of 984 DPN patients met inclusion exclusion criteria with a mean age of 60.08 years. 37.40% were female and 29.88% used insulin. 428 DPN patients (43.49%) received DPN pharmacologic treatment. Of those with DPN pharmacologic treatments, 91 (21.26%) received opioid as first line treatment. Antidepressants, anticonvulsants and NSAIDs were initially used by 28.97%, 23.60%, and 21.96% respectively. The most commonly used opioids were hydrocodone combinations (8.03%), followed by codeine combinations (2.44%) and oxycodone CR (2.44%). Factors associated with opioid use will be reported. CONCLUSIONS: Over 50% of DPN patients remained untreated with pharmacologic therapy after a DPN diagnosis, which may reflect under-treatment. Despite DPN treatment guidelines that do not recommend opioids as first line treatment, opioids were among the most common first line agents used.

PDB96 RACIAL VARIATIONS IN THE USE OF THIAZOLIDINEDIONES IN A MEDICAID POPULATION

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OBJECTIVES: To explore the association between race and the use of Thiazolidinediones (TZDs) and metformin among patients with Type II diabetes in the Maryland Medicaid population. METHODS: Medical/prescription/enrollment records from the Maryland State Medicaid Managed Care Organization/fee-for-service, ages 18 or older, initiating use of either metformin or TZDs between 7-105 and 12-31-09, followed for > 6 months. Variations in race over TZDs and metformin use are described. Logistic regressions assess the likelihood of 1) starting on TZDs over metformin (2) switching to metformin given in both new users and patients with Charlson-comorbidities, with first line use of DPN related medications were calculated. RESULTS: A total of 25,758 started on metformin (N = 19,910) or TZDs (N = 5,848). 20% of patients started on metformin used TZDs later, and 47% of patients started on TZDs used metformin later. 24% of Caucasians (N = 8,750), 21.5% of African-Americans (N = 14,004), 22% of Hispanics (N = 967), and 28.6% of other races (N = 1,201) were started on TZDs. 20% of Caucasians started on metformin switched to TZDs, as did 18% of African-Americans, 22% of Hispanics, and 24% of other races. Logistic regression shows that African-Americans (OR = 0.88, 95%CI 0.82-0.95) and Hispanics (OR = 0.80, CI 0.68-0.95) were less likely than Caucasians to be started on TZDs. Males (OR = 0.92, CI 0.86-0.98) were less likely than women, likelihood of initiation on TZD increases with age and OR (OR = 1.91, CI 1.62-2.25), and decreases if HTN (OR = 0.93, CI 0.90-0.97), diabetes (OR = 0.74-0.97), or CHF (OR = 0.46-0.63) are present. There was no association between race and the likelihood of switching to TZD once started on metformin. There was no evidence of sample selection bias in the first model. CONCLUSIONS: Minority diabetic patients were less likely than Caucasians to be started on TZDs rather than metformin.
HEALTH CARE UTILIZATION AND COST PATTERNS AMONG DIABETES

benefit design for preventive care, particularly among the privately insured. In 2009, the OPP share was inversely associated with diabetes status.

CONCLUSIONS: Insulin treatment patterns and restrictions on T2D patients across various settings, sometimes substantial. There is evidence that care, as monitored by nurse administered insulin injections, may be more restricted in home health-care than in institutional settings such as SNFs and VA facilities.

PDDB99 UNDERSERVED DIABETES MONITORING SERVICES AND OUT-OF-POCKET HEALTH CARE COSTS AMONG AMERICANS WITH DIABETES MELLITUS

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OBJECTIVES: Out-of-pocket (OOP) cost as a component of insurance benefit design has been found to be a barrier to medication adherence or use of preventive care. This study aimed to assess the association of OOP cost to diabetes-related expenditures in the United States. Patients with diabetes, 66.07% received proper monitoring. Well-monitored individuals were less likely to readmission was developed and estimated. Covariates included age, gender, race, ethnic origin among other factors. The OOP share was inversely associated with diabetes treatment in the US.

RESULTS: Among 5,445 (WTP) individuals with diabetes, 66.07% received proper monitoring. Well-monitored individuals had a lower OOP share (20.10% vs. 26.69%) than those that did not receive services. Individuals with private insurance, public insurance, and no insurance reported different OOP share: 21.79%, 15.65%, and 53.30%, respectively. The logistic regression indicated that individuals bearing high OOP share were less likely to receive proper monitoring among individuals with private insurance and no insurance [odds ratio (OR) = 0.99, 95% confidence interval (95% CI) = 0.981 - 0.999, OR = 0.98, 95% CI = 0.975 - 0.987, respectively]. OOP share was not a significant factor in public insurance beneficiaries. Other risk factors included older age, race/ethnic minorities, use of oral antihyperglycemic medications and insulin, and worse health status.

CONCLUSIONS: Nearly one-third Americans with diabetes did not receive proper diabetes monitoring in 2009. The OOP share was inversely associated with receiving proper monitoring, suggesting the OOP share should be considered in the benefit design for preventive care, particularly among the privately insured.

PDDB100 HEALTH CARE UTILIZATION AND COST PATTERNS AMONG DIABETES PATIENTS PRIOR TO INITIATION WITH SAXagliptin AND OTHER (NON-INSULIN) ANTIDIABETIC MEDICATIONS IN A US HEALTH PLAN

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OBJECTIVES: Health care resource utilization and costs may be indicators of disease severity and overall health status. In observational studies, these factors could influence patients’ probability of receiving or benefiting from a particular treatment. We compared pre-index utilization and costs in diabetes patients initiating saxagliptin versus other non-insulin anti-diabetic regimens. METHODS: Individuals age >18 years and with evidence of T2DM (ICD-9-CM 250.x0 or 250.x2) were identified from a US health plan database. Patients with ≥1 pharmacy claim for saxagliptin (SAXA) between August 1, 2009 and December 31, 2010 were assigned to the SAXA cohort, and patients with ≥1 pharmacy claim (August 1, 2009-December 31, 2010) for other oral anti-diabetic medications or GLP-1 analog were assigned to the Other cohort. Patients were required to be naive to SAXA or the Other regimen for 12 months prior to the index pharmacy claim. Utilization and costs were measured during a 12 month (pre-index) period before treatment initiation. RESULTS: Pre-index, the SAXA cohort (N = 4763) had higher rates of all-cause ambulatory visits (14.7 vs. 13.9, p < 0.001) and diabetes-related ambulatory visits (5.1 vs. 3.5, p < 0.001) compared to the Other cohort (N = 75,948). All patients had higher all-cause diabetes-related ambulatory and pharmacy costs (both p < 0.001). SAXA patients, however, had lower counts of pre-index all-cause and diabetes-related inpatient visits, all-cause ED visits, and lower all-cause inpatient and ED costs than the Other cohort. CONCLUSIONS: In a managed health care setting, pre-index resource utilization and costs of patients initiating SAXA were higher for ambulatory services and pharmacy, but ED visits and inpatient stays were lower, compared with patients initiating other anti-diabetic regimens. These findings suggest SAXA prescribing patterns could be influenced by differences in patients’ pre-index clinical characteristics and risk profiles, such as difficulty achieving glycemic control in the pre-index period.