drug use in Croatia from 2000-2013 and to identify the rate of the generic drug usage as well as the average price for 1 DDD. METHODS: Data on the consumption have been obtained from the database IMS (International Medical Statistics) for Croatia. According to the World Health Organization Collaborating Centre for Drugs Statistics Methodology annual volumes of drugs are presented in defined daily doses (DDD)/1000 inhabitant/day (D/D). Financial expenditure data are presented in Euros ($). RESULTS: The total usage of Agents acting on RAS (C09 subgroup) in constantly increasing from 58,56 DDD/1000 inhabitant/day in 2000 to 198,86 DDD/1000 inhabitant/day in 2013. In 14-year period, consumption in DDD/1000 inhabitant/day increased 241%, while the financial expenditure in same period increased 74% (from 28,8 m il in 2000 to 50,3 mil in 2013), but achieved its maximum in 2008 (57,7 mil €). The consumption share of generic Agents acting on RAS decreased from 90% in 2000 to 56% in 2006, then constantly increasing to 68% in 2008 (57,7 mil €). The common used medications. PCV102

association companies and cities where the change was not achieved.

Conclusion

The methods and limited data used and because of intrinsically high inter-country variability, the use of GDDP- national healthcare policy promoting generics resulted in their increase in share up to 2013. Although the generic drugs usage in C09 subgroup is relatively high, it should be further supported and promoted.

PCV101

RESULTS OF AN INTERVENTION IN PRESCRIPTION OF CONVENTIONAL RELEASE VITALIUM IN PATIENTS WITH HYPERTENSION IN COLOMBIA

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OBJECTIVES: Identify patients who are being treated for hypertension with conventional release Vitalium and verify the prescription, notify the responsible of health care about cardiovascular risk to which they are exposed and achieve a reduction in the number of patients who use it.

METHODS: A quasi-experimental prospective before and after study with out a control group was conducted in 729 patients diagnosed with hypertension to be found in treatment with CRV, between October 1, 2012 and December 31, 2012 in 8 Colombian cities from a database for dispensing medicines. Socio-demographic and pharmacological variables were evaluated. A total of 1086 educational interventions were performed for those responsible for health care, and evaluated within three months the proportion of suspension of the prescriptions of CRV. Multivariate analysis was performed using SPSS 22.0.

RESULTS: The mean age of patients was 67.9±11.8 years (range: 26-96 years). 70.6% were men. It was obtained that the treatment with CRV a total of 1922 patients (26.3% of users), distributed as follows: 1160 (60.4%) were the presentation of 120 mg, while 762 (39.6%) the 80 mg. The variable with the greatest incidence was age (OR 1.97, 95% CI 1.75-2.20; p=0.000). The use of medication was associated statistically significant with change of CRV by other antihypertensive.

CONCLUSIONS: We found relative moderate adherence to recommendations about the proper use of CRV in hypertensive patients. Must be reinforced intervention programs to increase the proper use of CRV, and the elderly patients and cities where the change was not achieved.

PCV102

DRUG USE AMONG SENIORS ON PUBLIC DRUG PROGRAMS IN CANADA, 2012

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OBJECTIVES: This analysis provides an in-depth look at the number and types of drugs used by seniors, and compares drug use among seniors living in long-term care (LTC) facilities and those living in the community.

METHODS: Data from the National Prescription Utilization Information System (NPDIS) Database, housed at CIHI, as submitted by eight Provincial drug programs and one Federal drug program in Canada, including drug claims for approximately 70% of Canadian seniors, was used to describe prescription drug use in seniors’ drug regimens. The most commonly used drug class was statins, which are used by almost half of seniors (46.6%). More than one-third of seniors (38.9%) had claims for a drug on the Beers list—a list of drugs identified as potentially inappropriate to prescribe to seniors. More than half of seniors living in LTC facilities were using 10 or more different drug classes (60.9%), more than double the proportion among seniors living in the community (26.1%). In LTC facilities benzodiazepine use was double the rate, antidepressant use triple the rate and antipsychotic use nine times the rate among seniors living in the community.

CONCLUSIONS: Findings suggest a high proportion of seniors, particularly those living in LTC facilities may be at risk for drug interactions and other adverse events due to the number of medications they are taking. This illustrates the importance of medication management strategies for seniors, and the need for communication between health care providers regarding seniors’ drug regimens.

PCV103

GENERIC DRUG DISCOUNT PROGRAMS AND THEIR POTENTIAL IMPACT ON THE COMPLETENESS OF CLAIMS DATA

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OBJECTIVE: Discount Drug Programs (DDPs), introduced in 2006 and offered by the majority of retail pharmacies nationwide, offer many commonly used medications at low out-of-pocket prices. The objective of this study was to estimate the proportion of prescription claims filled using a GDDP for four common medications (hydrochlorothiazide, metformin, and levothyroxine). Claims were considered GDDP-filled if the following criteria were met: the only recorded price paid was patient out-of-pocket, and the quantity dispensed and out-of-pocket price paid matched published GDDP pharmacy lists, including Walmart, Walgreens, CVS, Rite Aid, and Kroger. RESULTS: In 2006, the percentage of GDDP-filled prescriptions for hydrochlorothiazide, metformin, and levothyroxine was 8.1% (N=4,772,977) of hydrochlorothiazide, 4.0% (N=3,880,992) of levothyroxine, 0.01% (N=4,008) of metformin, and 0.0% of lisinopril. This increased in 2008, N=4,747,940 for hydrochlorothiazide, 18.2% (N=17,053,912) of metformin, and 18.2% (N=3,093,972) for levothyroxine.

CONCLUSIONS: By 2012, approximately 1 in 5 prescriptions for lisinopril, hydrochlorothiazide, metformin, and levothyroxine were filled using a GDDP. As they are cash-only, these prescriptions may not be processed via a pharmacy benefit manager, and therefore may be missing from insurance claims data.

PCV104

TIMELY USE OF ACE INHIBITORS AND ARBS AFTER NEWLY DIAGNOSED DIABETES AMONG OLDER ADULTS WITH HYPERTENSION IN THE US

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OBJECTIVES: ACE inhibitors and ARBs are the cornerstone of therapy for patients with hypertension and type 2 diabetes. However, they have been shown to be under-utilized in elderly patients at high risk for complications. The objective of this study was to assess early use of ACEIs/ARBs after incident diabetes by race/ethnicity groups, and 2) assess whether the use of ACEIs/ARBs improves over time after diabetes diagnosis by race/ethnicity group. METHODS: We identified fee-for-service Medicare beneficiaries ≥65 years of age who were newly diagnosed with diabetes from CMS data. Treatment use, baseline demographics, and other covariates were measured during the 12-month baseline period and the index date. Standardized differences were used to assess ACEI/ARB use and a marginal effects model with GEE was applied to investigate race/ethnicity differences in use rates. RESULTS: 55.9% of 135,923 patients received ACEI/ARB therapy within 3 months post-diabetes diagnosis (65.2% ACEIs, 38.5% ARBs). ACEI/ARB users within 3 months of diabetes diagnosis were younger and had fewer comorbidities, except for hyperlipidemia. Compared to non-users, ACEIs/ARBs users had more medication use. Among the racial/ethnic subgroups, Asians and Hispanics had the highest rate of use (59%), followed by Others (56%), White (55%), and Black (53%). Asians and Hispanics had 4% and 6% higher rates of treatment compared to Whites. Overall, rates of use over time decreased by 1% to 2%, except for a mild increase among Blacks (1% to 2%). However, subgroup analyses indicated that the decrease could be attributed to patients receiving ACEI/ARB therapy prior to diabetes diagnosis. Untreated patients showed an increase in use over time. CONCLUSIONS: Overall, ACEIs/ARBs are underutilized based on current treatment guidelines and use varies significantly across races/ethnicities. Future studies are needed to assess reasons for underuse of ACEIs/ARBs to promote better health outcomes.

PCV105

GAPS IN STATINS USE AMONG OLDER ADULTS WITH NEW ONSET DIABETES IN THE US

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OBJECTIVES: The prevalence of statin use in older adults with new onset diabetes (T2DM), frequently presenting with co-morbidities and susceptible to poor outcomes, has not been well characterized. The objective of this study was to examine and characterize the prevalence of statin use among Medicare patients newly diagnosed with diabetes, and to assess statins use gaps by age, gender, race/ethnicity and as well as those with and without underlying cardiovascular disease (CVD).

METHODS: This was a retrospective cohort study using pharmacy and medical claims data from CMS. Enrollees with a new T2DM diagnosis (index date) in 2008, aged 65 years or older, continuously enrolled in Medicare Part A, B, and D, and who survived at least 90 days after the index date were included. The prevalence of statin use within 90 days of index date across age, gender, race/ethnicity, and baseline CVD status was assessed. Multivariable logistic regression was applied to investigate the effects of the independent variables. RESULTS: An average statin usage rate of 75.1% was found (in 168,800 eligible patients included in the study). 66,525 patients in the cohort had underlying co-morbidity and CVD were more likely to receive statins than those without baseline CVD both before (OR 1.62, 95% CI 1.58-1.67) and after (OR 1.23, 95% CI 1.17-1.28) adjusting for baseline treatment including statin medications, post- diagnosis. Significant disparities in statin use were found in gender, race/ethnicity, and age. Males were more likely than females to receive statins. Asians also higher statin usage compared to Caucasians, and those aged 75-84 were more likely treatment compared to patients older than 75. CONCLUSIONS: Statin treatment use patterns vary significantly among newly diagnosed older adults with new onset diabetes.

PCV106

INFLUENCE OF COST SHARING DIFFERENTIALS ON THERAPEUTIC SUBSTITUTION AND MEDICATION ADHERENCE: THE STORY OF STATINS IN 2000

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OBJECTIVE: The availability of enhanced Medicare Part D plans with generic-only coverage during the coverage gap (e.g. donut hole) and the generalization of pravas-
tatin and simvastatin in early 2006, respectively, created a unique opportunity to examine potential post-18 y differences for brand-name and generic drugs, impact therapeutic substitution and medication adherence with statins. METHODS: Using the 2006 5% Medicare files we identified continuous fee-for-service Part D covered patients with hyperlipidemia (ICD-9-CM 272.0-272.4) using the brand-name (n=17,945) and generic (n=37,489) and overall covariates from the pre- to post-period compared to a control group of LIIS patients who faced no changes in brand-name ($3) or generic ($1) cost-sharing in the pre- and post-periods. The two groups were propensity-score matched on sociodemographics and clinical characteristics. Difference-in-difference regressions were used to examine impact on use of brand-name statins, generic statins, and overall any statin use. RESULTS: Patients having gaps, overall, and relative to Medicare Advantage patients (26,697) had a larger decline in brand-name statin use (-0.24 30-day-supply/month, p<0.001) and increases in discontinuation of statins.

PCV107 DIRECT MEDICAL COST COMPARISON BETWEEN PATIENTS RECEIVING CANGEROLE AND CLIDOGREDIL DURING THE CHAMPION PHOENIX INTERVENTION: CHAMPION PHOENIX ECONOMIC SUB-STUDY RESULTS Nicholson G., 1Cyr P., 1Fan W., 2Pentel S. 1Cardiovascular Medicine, Amgen Company, Parsippany, NJ, USA

OBJECTIVES: Intracoronary atherectomy complicates percutaneous coronary intervention (PCI). Cangrelor, a novel, intravenous P2Y12 inhibitor reduced the risk of death, MI, ischemia-driven revascularization and stent thrombosis at 48 hours by 50% compared to clopidogrel in the CHAMPION PHOENIX Trial. An economic sub-study was designed, from the perspective of the US healthcare system, to determine the direct medical costs during index hospitalization among cangrelor vs. clopidogrel-treated patients and the subgroup receiving bivalirudin as antithrombotic therapy. METHODS: Hospital bills were collected from participating US sites in the CHAMPION PHOENIX trial. Direct hospital costs were determined by multiplying itemized hospital charges and the cost-center specific cost-to-charge ratios obtained from hospital Medical Cost Report (MCR). A medical record search identifying in-hospital events, a medical record search identifying in-hospital events, and a medical record search identifying in-hospital events. The costs were imputed for patients where clinical but not economic data were available. After imputation, the index hospital costs from entire US population were compared between treatment groups. RESULTS: Thirty-eight US sites were invited and 22 participated. One site was excluded due to incomplete MCR. Hospital bills from 1117 patients (27.3% of 4,057 CHAMPION PHOENIX US population) were utilized. Median cost characteristics and complications were similar to the rest of the US population. After the MICE imputation, the index hospitalization cost for patients receiving cangrelor and clopidogrel were not statistically different ($11,755 cangrelor vs. $11,914 clopidogrel, P=NS, difference=-158) even when bivalirudin was the anticoagulant was utilized ($12,941 cangrelor/bivalirudin vs. $13,216 clopidogrel/bivalirudin, P=NS, difference=-275). Data also shows a numerical saving of $109 for clopidogrel-treated patients among cangrelor treated patients ($9,030 vs. $9,139, P=NS) with similar results among baseline subgroup. CONCLUSIONS: This analysis reveals similar direct medical costs, from the perspective of the US healthcare system, for cangrelor patients (with or without bivalirudin) during the index hospitalization and catheterization laboratory in the CHAMPION PHOENIX trial.

PCV108 HOSPITALIZATION COSTS FOR PATIENTS WITH HEART FAILURE USING CLAIMS DATABASES A COMPARISON BETWEEN COMMERCIAL AND MEDIGARE ADVANTAGE POPULATION Kielhorn A1, Maya J1, Song B2, Hesk HJ2, Patel H1 1Amgen, Thousand Oaks, CA, USA, 2Optum, Eden Prairie, MN, USA

OBJECTIVES: To estimate the mean cost per episode of hospitalization for patients with heart failure (HF). METHODS: A retrospective analysis was undertaken using a large US claims database, the Optum Research Database. Adult patients with a first observed inpatient HF claim (ICD-9: 428.xx; in primary position) between 01/01/08 and 06/30/13 were included. Patients having an inpatient claim for HF in the 2 months prior to the first observed claim were excluded. Direct costs included the amount paid by insurance plan, co-ordination of benefits and patient out-of-pocket costs. Cumulative hospitalization rates were estimated for all HF-related hospitalizations, cardiovascular (CV) hospitalizations and all-cause hospitalizations, within the six months prior to and further separated by types of insurance coverage for patients with commercial insurance and 77 years for those with Medicare Advantage. A total of 85,938 patients met the study criteria of which 68.3% (n=58,732) had Medicare Advantage coverage and 31.7% had commercial insurance coverage for patients with commercial insurance and 77 years for those with Medicare Advantage. For the total population (commercial + Medicare advantage), the mean direct costs were approximately $30,900 for a HF-related hospitalization, $30,400 for CV-hospitalization, $42,300 for all-cause hospitalization. For the all-cause population, the mean costs were approximately $48,500, $47,700 and, $40,000 for a HF-related, CV-related, and all-cause hospitalization episode, respectively. For patients with Medicare Advantage, the mean costs were approximately $23,800, $23,400 and $19,600 for HF-related, CV-related, and all-cause hospitalizations, respectively. CONCLUSIONS: Hospitals for patients with HF are costly. On average, hospitalizations for worsening HF could range from $22,800 to $48,500 depending on the type of coverage. The costs of hospitalizations were higher in patients with commercial insurance when compared to Medicare advantage patients.

PCV109 CURRENT RESOURCE UTILIZATION PATTERNS IN MEDICARE BENEFICIARIES DIAGNOSED WITH HEART FAILURE Patel N1, Sharma P1, Maya J2, Kligon A3 1Amgen, Thousand Oaks, CA, USA, 2University of Alabama at Birmingham, Birmingham, AL, USA

OBJECTIVES: To estimate annual hospitalization rates and associated direct costs for Medicare beneficiaries with heart failure (HF). METHODS: A retrospective analysis was undertaken using a large US claims database, the Optum Research Database. A total of 16,053,943 national sample of Medicare beneficiaries was used to identify individuals with first observed primary inpatient claim for HF (ICD-9-C 428.xx) between 07/01/2005 and 06/30/2012. These patients had a minimum of 18 months of covered Medicare Advantage (n=23,492) and for HF-related hospitalization were approximately $16,000. CONCLUSIONS: Patients with HF who have been hospitalized had frequent subsequent hospitalizations. Overall costs associated with hospitalizations per year, one of them being due to worsening of HF. These hospitalizations were costly, with costs ranging from $14,000 to $17,300 per episode.

PCV110 BASELINE DEMOGRAPHICS AND CLINICAL CHARACTERISTICS ASSOCIATED WITH HEALTHCARE COSTS AMONG PATIENTS WITH ATHEROSCLEROTIC CARdiovascular DISEASE (ASCVD) METHODS: This retrospective cohort study identified newly diagnosed ASCVD patients aged ≥18 years using claims data from the HealthCore Integrated Research Database (HIRD) between 1/1/07 and 1/31/12 (index date). All patients had a documented ASCVD diagnosis before the index date and during the index period. The index insurance enrollment, valid baseline lipid panel values, and no baseline lipid lowering medication use. Costs were adjusted to 2013 U.S. dollar values. Bivariate analysis of the generalized linear models with gamma distribution and link log was used to examine baseline factors associated with 12 month follow-up all-cause and ASCVD-related healthcare costs. RESULTS: In the regression model for all-cause hospitalizations patients with age (N=26,376). Older age, plan region including South and West (vs. Midwest), higher Quan-Charlson Comorbidity Index, index acute coronary syndrome (ACS), ischemic stroke or transient ischemic attack, baseline dependence, pain, obesity, and chronic kidney disease, baseline use of antihypertensive agents, antidiabetic medications, and digoxin, and higher baseline lipids, were positively associated with follow-up all-cause healthcare costs (p<0.05). In addition, female, Northeast plan (vs. Midwest), Health Maintenance Organization (vs. Preferred Provider Organization), Medicare Advantage plans, index dependence, index chronic kidney disease (except for ACS) or peripheral artery disease, baseline dyslipidemia, and baseline goal attainment of low-density lipoprotein cholesterol (<100 mg/dL), high-density lipoprotein cholesterol (>40/50 mg/dL for males and females respectively), triglycerides (<150 mg/dL), and total cholesterol level (<200 mg/dL) were negatively associated with follow-up all-cause healthcare costs (p<0.05). Similar findings were reported for ASCVD-related healthcare costs (N=26,376). CONCLUSIONS: As age, gender, and baseline comorbid conditions, baseline use of specific medications, baseline lipid profiles, and more severe index ASCVD were significantly associated with all-cause and ASCVD-related healthcare costs. Geographic location and health insurance type also played a significant role in healthcare costs among ASCVD patients.

PCV112 ANNUAL HOSPITALIZATION FREQUENCY FOR PATIENTS WITH HEART FAILURE A COMPARISON BETWEEN COMMERCIAL AND MEDICARE ADVANTAGE POPULATION Patel N1, Shrama P1, Maya J2, Hesk HJ2, Kligon A3 1Amgen, Thousand Oaks, CA, USA, 2Optum, Eden Prairie, MN, USA

OBJECTIVES: To identify baseline demographics and clinical characteristics associated with healthcare costs among patients with atherosclerotic cardiovascular disease (ASCVD). METHODS: This retrospective cohort study identified newly diagnosed ASCVD patients aged ≥18 years using claims data from the HealthCore Integrated Research Database (HIRD) between 1/1/07 and 1/31/12 (index date). All patients had a documented ASCVD diagnosis before the index date and during the index period. The index insurance enrollment, valid baseline lipid panel values, and no baseline lipid lowering medication use. Costs were adjusted to 2013 U.S. dollar values. Bivariate analysis of a generalized linear models with gamma distribution and log link was used to examine baseline factors associated with 12 month follow-up all-cause and ASCVD-related healthcare costs. RESULTS: In the regression model for all-cause hospitalizations patients with age (N=26,376). Older age, plan region including South and West (vs. Midwest), higher Quan-Charlson Comorbidity Index, index acute coronary syndrome (ACS), ischemic stroke or transient ischemic attack, baseline dependence, pain, obesity, and chronic kidney disease, baseline use of antihypertensive agents, antidiabetic medications, and digoxin, and higher baseline lipids, were positively associated with follow-up all-cause healthcare costs (p<0.05). In addition, female, Northeast plan (vs. Midwest), Health Maintenance Organization (vs. Preferred Provider Organization), Medicare Advantage plans, index dependence, index chronic kidney disease (except for ACS) or peripheral artery disease, baseline dyslipidemia, and baseline goal attainment of low-density lipoprotein cholesterol (<100 mg/dL), high-density lipoprotein cholesterol (>40/50 mg/dL for males and females respectively), triglycerides (<150 mg/dL), and total cholesterol level (<200 mg/dL) were negatively associated with follow-up all-cause healthcare costs (p<0.05). Similar findings were reported for ASCVD-related healthcare costs (N=26,376). CONCLUSIONS: As expected, age, gender, baseline comorbid conditions, baseline use of specific medications, baseline lipid profiles, and more severe index ASCVD were significantly associated with all-cause and ASCVD-related healthcare costs. Geographic location and health insurance type also played a significant role in healthcare costs among ASCVD patients.

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