A147



drugs in Croatia from 2000-2013 and to identify the rate of the generic drugs 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/1000 inhabitants/day (DDD/1000), while 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 inh/day in 2000. to 199,88 DDD/1000 inh/day in 2013. In 14-year period, consumption in DDD/1000 inh/day increased 241%, while the financial expenditure in same period increased 74% (from 28,8 mil ϵ in 2000 to 50,3 mil ϵ in 2013), but achieved its maximum in 2008 (57,7 mil ϵ). The consumption share of generic Agents acting on RAS decreased from 90% in 2000 to 56% in 2006, then constantly increasing to 68% in 2013. CONCLUSIONS: Drugs prescription patterns among Agents acting on RAS have been changing during the 14-year period in Croatia. Impact of generics decreased until 2006. Because of introduction of new original drugs, but the national healthare policy promoting generics resulted in their increase of share up to 2013. Although the generic drugs usage in C09 subgroup is relatively high, it should be further supported and promoted.

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

Machado J, Machado-Duque M, Giraldo C

Universidad TecnolÃ3gica de Pereira, Pereira, Colombia

OBJECTIVES: Identify patients who were being treated for hypertension with conventional release verapamil (CRV), notify the responsible of health care about cardiovas-cular 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 without a control group was conducted in 7289 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 108 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. Was obtained that discontinue 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 being treated in the city of Medellín (OR: 17.6; 95% CI: 11.949 to 25.924; p <0.001) was associated statistically significant with change of CRV by another antihypertensive. CONCLUSIONS: We found relative moderate adherence to recommendations about the proper use of CRV in hypertensive patients. Must be reinforced intervention programs that reduce inappropriate prescribing of potential risks to patients of insurance companies and cities where the change was not achieved.

PCV102

DRUG USE AMONG SENIORS ON PUBLIC DRUG PROGRAMS IN CANADA, 2012 <u>Proulx J</u>

CIHI, Ottawa, ON, Canada

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 Drug Utilization Information System (NPDUIS) 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. RESULTS: In 2012, nearly two-thirds (65.9%) of seniors had claims for 5 or more drug classes, and more than one-quarter (27.2%) of seniors had claims for 10 or more drug classes. The proportion of seniors age 85 and older with claims for 10 or more drug classes (39.3%) was double that of seniors age 65 to 74 (20.0%). Six of the 10 drug classes most commonly used by seniors were cardiovascular-related. 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.

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

Thompson JA, Kelton CM, Heaton PC

University of Cincinnati, Cincinnati, OH, USA

OBJECTIVES: Generic Drug Discount Programs (GDDPs), 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 commonly used medications. **METHODS:** The Medical Expenditure Panel Survey annual prescribed medicines event file, a nationally representative sample that contains detailed drug information including payments made by private insurance, Medicaid/ Medicare, out-of-pocket, and other sources, was used for this study. Annual prescription claim records, including new fills and refills of any quantity dispensed, were

estimated from 2006-2012 for all branded and generic monotherapy formulations of lisinopril, 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 pricepaid matched published GDDP pharmacy lists, including Walmart, Walgreens, CVS, RiteAid, and Kroger. **RESULTS:** In 2006, the percentage of GDDP-filled prescriptions was low: 8.1% (N=4,472,797) 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, to 2.4% (N=1,676,928) for metformin, 8.0% (N=7,107,840) for lisinopril, 16.8% (N=9,024,532) for hydrochlorothiazide, and 18.9% (N=13,035,972) for levothyroxine. In 2009, all medications had a GDDP-filled rate around 20% or greater. The highest percentages were seen in 2010: 22.5% (N=12,033,009) of hydrochlorothiazide, 25.1% (N=27,033,234) of levothyroxine, 25.5% (N=17,593,051) of metformin, and 29.6% (N=30,115,329) of lisinopril. By 2012 this decreased, and 19.6% (N=9,715,614) of hydrochlorothiazide, 20.3% (N=20,813,050) of lisinopril, 22.1% (N=21,425,226) of levothyroxine, and 23.2% (N=17,842,540) of metformin prescriptions were GDDPfilled. 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.

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

Bogart M, Fang G, Annis I

UNC Eshelman School of Pharmacy, Chapel Hill, NC, USA

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 underutilized in elderly patients at high risk for complications. The objectives of this study are to 1) assess earlier use of ACEIs/ARBs after incident diabetes diagnosis 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 feefor-service Medicare beneficiaries over the age of 65 with hypertension and newly $diagnosed\,T2DM\,using\,data\,from\,CMS.\,Treatment\,use, baseline\,demographics, and$ 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: 55.5% 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 after a 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 Other (56%), White (55%), and Black (53%). Asians and Hispanics had 4% and 6% higher RR for use and Blacks had a 2% lower RR 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.

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

Chung TA, Bogart M, Annis I, Fang G

UNC Eshelman School of Pharmacy, Chapel Hill, NC, USA

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, and race/ ethnicity as well as those with and without underlying cardiovascular disease (CVD). METHODS: This was a retrospective cohort study using pharmacy and medical claims 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 46.3% was found in the 168,800 eligible patients included in the study. 66,525 patients in the cohort had underlying co-morbid CVD and 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 65-74 were more likely use treatment compared to patients older than 75. CONCLUSIONS: Statin treatment usage patterns vary significantly among newly diagnosed older adults with new onset diabetes.

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

Li P, Schwartz SJ, Doshi JA

University of Pennsylvania, Philadelphia, PA, USA

OBJECTIVES: The availability of enhanced Medicare Part D plans with generic-only coverage during the coverage gap (i.e. donut hole) and the genericization of pravas-