OBJECTIVES: Pharmaceutical expenditure accounted for between 11% to 13% of total health care expenditure in 2013 in Japan, compared with 79% in the United States. In 2010, a change was 20% in Japan for the same year. We expect that big changes in sales pattern will happen as a result of patent expiry. Other changes have been seen when prescribers get negative/positive information on drugs. In this article we study the impact of negative/positive information on prescribing patterns in Japan. METHODS: we selected angiotensin-converting enzyme inhibitors (ACEIs) and Angiotensin II receptor blockers (ARBs) widely used in Japan and included patients switching. Several univariate and autoregressive integrated moving average (ARIMA) modeling with intervention analysis was used to estimate the change of sales volume. RESULTS: Losartan had a positive change (%7650, p=0.0068) in October 2010, Candesartan had a negative change (%6500, p=0.0066) in July 2010. There were no significant differences in the sales volume of Losartan, Telmisartan, except for Candesartan in Japan (0.04686, p=0.7995 -0.38547, p=0.0880, and -1.21215, p=0.001), respectively. In this study, we used a public information for hypertensive drugs in Japan and found that the sales pattern of selected drugs were changed by negative information on their business. The change in the method of calculating generic drugs has a small impact on the consumption of antihypertensive drugs and on the case of monocomponents. OBJECTIVES: to study the impact of negative/positive information on drug’s consumption and the possibility of switching from Candesartan to a combination therapy. Further assessment will be needed since factors associated with the change of use of drugs will be infinite. PCV151

THE IMPACT OF MODIFICATIONS OF THE FORMULA FOR GENERIC DRUGS ON PATIENTS’ MEDICATION PATTERNS

Shimizu S, Imae S, Ishikawa KB, Ikeka S, Fushimi K

1Department of Health Policy, Management and Information, 2National Hospital Organization, Tokyo, Japan, 3National Cancer Center, Tokyo, Japan, 4International University of Health and Welfare, Ohtawara City, Japan, 5Tokyo Medical and Dental University Graduate School of Medicine

OBJECTIVES: From April 2013, the method of calculating the prescription rate of generic drugs in Japan was changed and protected brand name drugs were excluded from the denominator. In the case of Japan, which does not have a reference pricing system, it is thought that this change will lead to a change in the prescriptions toward protected brand name drugs rather than drug substitution to generic drugs. The objective of this study is to clarify the trends in relation to the prescription of generic drugs, through the use of administrative data on a nationwide level.

METHODS: We used survey data from dispensing pharmacies from April 2012 to March 2014. As a comparison, we used the prescription data of 1139 acute care hospitals in which incentive measures for drug substitution to generic drugs had not been in place at the same period. The products in question were drugs for diabetes and hypertensive diseases. For data analysis used SQI Server, 2008 R2 and R.

RESULTS: As the dispensing pharmacy receives additional compensation based on the rate of generic drugs dispensed by that pharmacy in the most recent 3 months, the dispensing rate of generic drugs will have a direct impact on their business. The change in the method of calculating generic drugs has a major impact on the dispensing pharmacies, and in this study we have shown the possibility of dispensing pharmacies shifting more to protected brand name drugs. The dispensing rate of generic drugs by acute care medical facilities has always been low, and thus the impact of the change in calculation of the dispensing rate of generic drugs became prominent. CONCLUSIONS: The results of this study show that when encouraging drug substitution to generic drugs as a policy to reduce drug expenditure, it is necessary to consider measures in relation to the shift to protected brand name drugs.

PCV152

ANALYSIS OF CARDIAC IMPLANTS RECALLS IN THE LAST DECADE: AN INTERNATIONAL COMPARISON

Zhang SX, Kriza C, Schaller SU, Kolominsky-Rabas PL
Centre for Health Technology Assessment (HTA) and Public Health (ZDPS), Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany

OBJECTIVES: The objectives of this research are to provide an overview of the recalls of cardiac implant medical devices in the last decade according to the different categories of cardiac implant medical devices and analyze the recall reasons. On the basis of this analysis, this research will provide recommendations on how to build a high quality implant registry. METHODS: A systematic search was performed focusing on regulatory bodies’ homepages from a range of middle and high-income countries with sufficient information on cardiac implant recalls and the related reasons. Data was extracted for the years 2004-2013 (n=104) and the turnover of AH dropped by 4% as a consequence of introducing new drugs. The impact of new regulations was expressed foremost in the compliance with the RA S's for drugs, where the decrease in turnover after introduction of clusters in 2012 was 14%. In the evaluated period, the final price of AH was reduced by 35% (from €8.86 to €5.78) and the reimbursement was reduced by 52% (from €7.87 to €3.79) for the same time period. The reduction in turnover was 100% (from €0.99 to €2.03). In the evaluated period, the patient co-payment for a fixed AH almost quadrupled (from €1.05 to €4.05). The patient paid an average of 0.93 more for one pack of fixed AH than for a free combination. After the introduction of regulations, the co-payment for fixed combinations grew at a slower pace than in the case of monocomponents.

CONCLUSIONS: The legislative changes in drug policy had a significant impact on the consumption of antithrombotic drugs and on the reimbursement structure. Further research is necessary to monitor the impact of the regulations on the prescription of AH and to evaluate factors that could influence the success of hypertension treatment.

PCV153

ORAL ANTICOAGULANTS WITH NON-VALVULAR ATRIAL FIBRILLATION IN THE US: A CHARACTERIZATION OF DAGIRBATAN INITIATORS AND SWITCHERS

Shah D, Schnee J, Schneider G, School N, Zint K, Clemens A, Barlitz DB

1Boehringer Ingelheim GmbH, Ingelheim, Germany, 2Boehringer Ingelheim Pharmaceuticals Inc, Ridgefield, CT, USA, 3Evidera, Lexington, MA, USA, 4University Medical Center Mainz, Mainz, Germany

OBJECTIVES: In routine clinical practice the selection of a particular anticoagulant for treatment of a specific patient may be based on a variety of different factors. The aim of this study was to explore if there were differences in the characteristics of patients with non-valvular atrial fibrillation (NVAF) who started on dabigatran etexilate (DE) and who in the prior year had no oral anticoagulant treatment (initiators) versus those who were previously treated with warfarin (switchers). METHODS: Medical claims data were used to characterize 7,055 NVAF patients from the US with a DE prescription between Feb 2011 and Apr 2012. The first prescription in this period was used to index the date. The treatment groups were stratified by initiators and switchers. Characteristics, comorbidities, and comediations in the 12-month period prior to index date were assessed. All illustrated differences were statistically significant (p <0.05) (5). RESULTS: Switchers (N = 2,585) had a mean age of 74.0 (±8.6) years, whereas initiators (N=4,470) were younger (mean 70.0 (±6.9) years). A higher proportion of switchers used comediations compared to initiators, e.g. beta blockers (66% vs. 59%), and gastrointestinal drugs (34% vs. 28%). Switchers were more likely to have concomitant disease, hypertension, cerebrovascular disease, renal disease and bleeding related hospitalizations when compared to the initiators, and also had a higher mean CHA2DS2-VASc score (4.0 (±1.8) compared to initiators 3.4 (±1.9)). CONCLUSIONS: This study shows differences between patients who switch to the new anticoagulant DE as first anticoagulant treatment initiated from warfarin to DE revealing that switchers might represent a distinct patient population. Identifying, stratifying or accounting for such differences are necessary in clinical trials using real world data. (1) Schoof N et al., Characteristics of patients taking oral anticoagulants with non-valvular atrial fibrillation using dabigatran or warfarin in the US. Curr Med Res Opin. 2013 Dec 27.

PCV154

IMPACT OF DRUG POLICY REGULATIONS ON THE CONSUMPTION OF ANTIHYPERTENSIVE DRUGS IN SLOVAKIA

Kereczova M, Foltin V, Mackovicova S, Marianova M, Minarikova D, Tomek D

1Pharm-In Ltd, Bratislava, Slovak Republic, 2Faculty of Pharmacy, Comenius University, Bratislava, Slovak Republic, 3Comenius University, Bratislava, Slovak Republic, 4Slovak Medical University, Bratislava, Slovak Republic

OBJECTIVES: In 2011, various legislative measures were adopted in Slovakia regarding drug policy. The aim of the submitted work is to evaluate links between the introduction of regulations and the consumption of antihypertensive drugs (AH), expenditure on co-payments and the course of prices monitored on IMS Data. Patient co-payments data were taken from the National Health Information database. When evaluating the average amount of co-payments, we applied a weighted average, which takes into account the level of co-payment and consumption. RESULTS: The consumption of AH (in DOT) increased continually in 2006-2013 (+36%) and the turnover of AH dropped by 4% as a consequence of introducing new drugs. The impact of new regulations was expressed foremost in the compliance with the RA S’s for drugs, where the decrease in turnover after introduction of clusters in 2012 was 14%. In the evaluated period, the final price of AH was reduced by 35% (from €8.86 to €5.78) and the reimbursement was reduced by 52% (from €7.87 to €3.79) for the same time period. The reduction in turnover was 100% (from €0.99 to €2.03). In the evaluated period, the patient co-payment for a fixed AH almost quadrupled (from €1.05 to €4.05). The patient paid an average of 0.93 more for one pack of fixed AH than for a free combination. After the introduction of regulations, the co-payment for fixed combinations grew at a slower pace than in the case of monocomponents.

CONCLUSIONS: The legislative changes in drug policy had a significant impact on the consumption of antithrombotic drugs and on the reimbursement structure. Further research is necessary to monitor the impact of the regulations on the prescription of AH and to evaluate factors that could influence the success of hypertension treatment.
associated with NOAC use included rate/rhythm control treatments (OR: 0.78, 95% CI 0.70–0.85) and use of combination therapy with aspirin and NOAC. Aspirin was used in 24% of patients, mostly when NOAC were contraindicated or ineffective. NOAC use was associated with lower likelihood of NOAC initiation, as recently observed in other jurisdictions. Such uptake patterns have implications for real-world cost-effectiveness and outcomes studies.

PCV156 INVESTMENT ASPECTS OF GENERIC DRUG POLICIES IN COUNTRIES WITH SEVERE RESOURCES CONSTRAINTS

Káli Z1*, Harasznyi A1, Vamosy F1
1Eötvös Loránd University, Budapest, Hungary, 2Közgazdasági Kutató Főzködő, Budapest, Hungary

OBJECTIVE: The objective of generic drug policies can be defined as reduction in health care expenditure without compromising health outcomes. This definition is based on the disinvestment aspect of drug policies. However, the objective of generic drug policies can also be defined as reduction in health care expenditure without compromising health outcomes, especially in those countries with volume limits for the use of original patented drugs due to economic constraints: increase in population health gain by improved patient access without need for additional health expenditure. Our objective was to compare benefits of generic drugs policies in Germany vs Hungary. We reviewed the grey literature and IMS database to identify pharmaceutical products with (1) patent expiry in recent years, (2) major therapeutic advancement to previous standard therapies, (3) no direct therapeutic alternative at patent expiry, (4) pharmacy distribution and consequently reliable IMS sales records in different countries. Then we compared aggregated annual volume sales in DDD and ex-factory sales for the selected pharmaceuticals in these countries. By analyzing the ratio of aggregated annual volume sales in DDD and ex-factory sales we can estimate the market share of patented drugs in a market. We then compared aggregated annual volume sales in DOT and ex-factory sales for the selected pharmaceuticals in Hungary, and analyzed in Statistical Analysis Software (SAS). RESULTS: The average annual percentage increase in sales in Hungary was very high when compared to Germany. In Germany the volume sales of clopidogrel products increased by 1.7% with 3 years after first generic entry, in Hungary the increase was 120.5%. The ex-factory sales were attributed to ticagrelor was calculated for each GP Practice and Clinical Commissioning Group (CCG) cluster.

PCV157 THE IMPACT OF DRUG POLICY ON THE UTILIZATION OF MEDICATIONS FOR TREATMENT OF CARDIOVASCULAR DISEASES IN SLOVAK REPUBLIC

Catalova A1, Foltan V1, Majtas J2
1Comenius University, Bratislava, Slovak Republic, 2Faculty of Pharmacy, Comenius University, Bratislava, Slovak Republic

OBJECTIVES: The objective of generic drug policies can be defined as reduction in health care expenditure without compromising health outcomes. Our objective was to assess the impact of generic drug policies in the Slovak Republic. We included only those patients who are followed in cardiology in SR. Reportedly, the proportion is at 8-10%. Accurate data on morbidity from cardiovascular disease in the world includes only those patients who are followed in cardiology in SR. Reportedly, the proportion is at 8-10%. Accurate data on morbidity from cardiovascular disease in the world. The consumption in financial units declined while consumption in DDD increased. The consumption in financial units for all ATC group under our scope reached the level of 4,3% (2012 vs 2005). Amount of drug costs allocated to cardiovascular drug escalated in 2011 with almost 197 million EUR, average price for package reached 5,38 EUR in same year and price per 1 DDD was 0,17 EUR per 1 DDD (2012 compare to 0,16 EUR (2005). Overall unit sales results from 2005 to 2012 show decreasing trend with tendency till 2010 with following slight declined. Growth in units in all ATC group under our scope reached the level of 4,3% (2012 vs 2005). Standardized death rate for CVD decreased from 637,3 in 2005 to 510,4 in 2012 (per 100.000 population) indicating for CVD management in Slovakia during 8 years (2005-2012) a significant decrease. The standardized death rate for CVD also decreased in 2012 vs 2005. It is important for regulatory bodies and payers to continue in taking adequate measures that will ensure rational pharmacotherapy. We used the MarketScan® plus Earlyview data from 10/1/2009 to 12/31/2013. The system was associated with rational use of statins and reducing disallowed rate of statins reimbursement. This study aims to analyze the economic outcomes after implemented the system. METHODS: The major cause of death was the lipid profile fragmented in the medical record. The annual cost of statins consumption was the first five human medications in Taiwan. Therefore, disallowed/reduction of reimbursement from Administration of National Health Insurance (NHI) was relatively higher than other drugs. "Automatic Laboratory data Checking System" was established in order to enhance rational use of statins and to reduce disallowed rate of statins reimbursement. This study aims to analyze the economic outcomes after implemented the system.

PCV158 LOCAL VARIATION IN PRIMARY CARE PRESCRIBING BEHAVIOR IN ENGLAND: TICAGRELOR

Barr KE1, Panroy HD
1McKinsey & Co, London, UK

OBJECTIVES: To understand the level of local variation in community-level prescribing of ticagrelor in England, after national-level recommendation from NICE in 2011. METHODS: A GP Practice level retrospective cohort study was conducted using the MarketScan® plus Earlyview data from 10/1/2009 to 12/31/2013. Adult NVAF patients (ICD-9 code 427.31 or 427.32) with one year of baseline period and at least 90 days of index period during the baseline period were included for at least 3 months immediately before the index date (defined as the first NOAC claim) were included. Patients with evidence of valvular heart disease, thyrotoxicosis, pericarditis, mitral stenosis, VTE, cardiac surgery, and endocarditis during the baseline period were excluded. RESULTS: The prescription of ticagrelor in England, after national-level recommendation from NICE in 2011. The prescription of ticagrelor in England, after national-level recommendation from NICE in 2011. The prescription of ticagrelor in England, after national-level recommendation from NICE in 2011. The prescription of ticagrelor in England, after national-level recommendation from NICE in 2011.

PCV159 CLINICAL AND DEMOGRAPHICS CHARACTERISTICS OF NON-VALVULAR ATRIAL FIBRILLATION PATIENTS SWITCHING FROM WARFARIN TO NOVAL ORAL ANTICOAGULANTS

Kachroo G1, Pan K1, Liu L1, Kawabata H1, Phatak H1
1Myers Squibb Company, Princeton, NJ, USA, 2Bristol Myers Squibb, New Haven, CT, USA, 3 Pfizer, New York, NY, USA, 4 Bristol Myers Squibb, Hopewell, NJ, USA

OBJECTIVES: This real-world study evaluated the baseline characteristics of patients with non-valvular atrial fibrillation (NVAF) who had switched from warfarin to novel oral anticoagulants (NOACs) using a retrospective cohort study conducted using the MarketScan® plus Earlyview data from 10/1/2009 to 12/31/2013. Adult NVAF patients (ICD-9 code 427.31 or 427.32) with one year of baseline period and at least 90 days of index period during the baseline period were included for at least 3 months immediately before the index date (defined as the first NOAC claim) were included. Patients with evidence of valvular heart disease, thyrotoxicosis, pericarditis, mitral stenosis, VTE, cardiac surgery, and endocarditis during the baseline period were excluded. In total, 1,743 eligible patients were included in the analysis. The characteristics of patients switching from warfarin to NOACs were compared using Pearson’s chi-square test while continuous variables were compared using Wilcoxon signed-rank test. RESULTS: Among 11,743 eligible patients, 427 (3.64%) switched to a NOAC within the study period.