OBJECTIVES: Pharmaceutical expenditure accounted for between 11% to 13% of total healthcare expenditure in 10 European countries in 2010 which 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 prescription get negative/positive information on drugs. In this article we study the impact of past and future information relating to pharmaceutical policies on pharmaceutical sales patterns of selected drugs in Sweden and Japan. METHODS: we selected angiotensin-converting enzyme inhibitors (ACEIs) and Angiotensin II-type receptor blockers (ARBs) in Sweden primarily used in the United Kingdom and Japan. Several approaches to integrated moving average (ARIMA) modeling with intervention analysis was used to estimate the change of sales volume. RESULTS: Losartan had a positive change (0.77650, p = 0.0068) in October 2010, Candesartan had a negative change (-0.50760, p = 0.0068) in July 2010. There were no significant differences in the sales volume of Losartan, Telmisartan, except for Candesartan in Japan (p = 0.04686, p = 0.7995, -0.38547, p = 0.0880, and -1.21215, p = 0.001, respectively). In this study, we used a public dataset in which Candesartan and Losartan patients’ mortality by a journal July 2009 as negative information. CONCLUSIONS: We found that the sales pattern of selected drugs were changed by negative information and not by the expiry of their patents in Sweden. Whereas in Japan the negative signal may lead to a change in prescription like the therapeutic substitution of Trandolapril and the possibility of switching from Candesartan to a combination drug was seen. Further assessment will be needed since factors associated with the changing use of drugs will be infinite.

PCV151
THE IMPACT OF MODIFICATIONS OF THE FORMULA FOR GENERIC DRUG PRESCRIPTION RATE ON THE SWITCH TO NEW BRAND-NAME DRUGS WITH SIMILAR THERAPEUTIC USES
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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 will lead to a change in 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 implemented 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 in response to the new law. 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
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OBJECTIVES: In routine clinical practice the selection of a particular anticoagulant for treatment in an individual 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 (D) and who in the prior year had no oral anticoagulant treatment (initiators) versus those who had previously been treated with warfarin (switchers). METHODS: Medco claims data were used to characterize 7,054 NVAF patients from the US with a D prescription between Feb 2011 and Apr 2012. The first prescription in this period preceded the index date. The treatment-groups were stratified by initiators and switchers. Characteristics, comediations, and comorbidities in the 12-month-period prior to index date were assessed. All illustrated differences were statistically significant (p < 0.05) (1). RESULTS:Switchers (N = 2,585) had a mean age of 74.0 (±8.6) years, whereas initiators (N = 1,003) were younger (mean 70.0 (±6.6) 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 congestive heart failure, 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 started on dabigatran D as first implant treatment and patients who switched from warfarin to D revealing that switchers might represent a distinct patient population. Identifying, stratifying or accounting for such differences are necessary in current real-world studies using real-world data. (2) Zhang S.X., Schaller S.U., Kolominsky-Rabas P.L., 34,944 new initiators of oral anticoagulants were included. 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 of AH and patient co-payments. We evaluated the impact of new regulations, based 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 regulations. The impact of new regulations was expressed foremost in the consumption of drugs for RAS inhibition, 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 5% (from € 8.86 to € 7.58) and the reimbursement was reduced by 52% (from € 7.87 to € 3.75). As a consequence, the increase in average co-payment decreased by 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 consumption of 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 antihypertensive drugs and on the expenditure of prescription items. The aim of this study was to understand the impact of regulations on the prescription of AH and to evaluate factors that can influence the success of hypertension treatment.

PCV153
IMPACT OF DRUG POLICY REGULATIONS ON THE CONSUMPTION OF ANTIHYPERTENSIVE DRUGS IN SLOVAKIA
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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 of AH and patient co-payments. We evaluated the impact of new regulations, based 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 regulations. The impact of new regulations was expressed foremost in the consumption of drugs for RAS inhibition, 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 5% (from € 8.86 to € 7.58) and the reimbursement was reduced by 52% (from € 7.87 to € 3.75). As a consequence, the increase in average co-payment decreased by 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 consumption of 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 antihypertensive drugs and on the expenditure of prescription items.

PCV155
INITIATION OF ORAL ANTICOAGULANT IDENTIFICATION: DRIVERS OF STUDIES OF PRESCRIBING OF NEW AGENTS VERSUS WARFARIN
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OBJECTIVES: Oral anticoagulants (OACs), used for stroke prevention in atrial fibrillation, include warfarin and the newer drugs (NOACs) dabigatran, rivaroxaban and apixaban. High direct drug costs of the NOACs to the health care payer prompt monitoring of real-world NOAC uptake patterns. This study aimed to identify factors associated with anticoagulation initiation with NOACs versus warfarin. METHODS: Analyses were performed using national pharmacy claims data from a means-tested state medical services scheme. First-time initiators of an oral anticoagulant between January 2009 and December 2013 with ≥1 year scheme eligibility and ≥50 age were identified. A total of 54,273 patients were selected and a sub-cohort of 30,380 patients were recalled due to incorrect therapy delivery; 15.4% had complications; 15.4% had complications and connection problems and 5.8% of patients did not deliver correct output data. CONCLUSIONS: Due to the high-risk nature of cardiac implant medical devices, drug-related high complication rates associated with considerable associated mortality, the traceability and transparency of safety hazards information are crucial. By analyzing the recall information including recall reasons and cardiac implant categories, important information is gained that can inform a high-quality cardiac implant registry for monitoring the safety of cardiac implant patients.
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OBJECTIVES: The objective of generic drug policies can be defined as reduction in health care expenditure without compromising health outcomes. This 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. This is based on the disinvestment aspect of drug policies. We reviewed the grey literature and IMS database to identify pharmaceutical products with patent expiry in recent years, major therapeutic advancement to previous standard therapies, no direct therapeutic alternative at patent expiry, (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 +/−3 years before and after first generic entry. RESULTS: In this analysis we present the case of clopidogrel. 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 4-fold of the volume entry in both countries, by 30.1% in Germany and by 59.5% in Hungary. CONCLUSIONS: In Germany off-patent clopidogrel generated significant savings without volume increase. In Hungary generic products significantly increased in market share with introduction of generic clopidogrel, in addition to reducing pharmaceutical expenditure. Incremental health gain of off-patent medicines should not be underestimated in those countries, where accessibility of patients to patented medicines in restricted.

PCV156

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

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OBJECTIVES: The objective of generic drug policies can be defined as reduction in health care expenditure without compromising health outcomes. This 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. This is based on the disinvestment aspect of drug policies.

Methods: 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 +/−3 years before and after first generic entry. RESULTS: In this analysis we present the case of clopidogrel. 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 4-fold of the volume entry in both countries, by 30.1% in Germany and by 59.5% in Hungary. CONCLUSIONS: In Germany off-patent clopidogrel generated significant savings without volume increase. In Hungary generic products significantly increased in market share with introduction of generic clopidogrel, in addition to reducing pharmaceutical expenditure. Incremental health gain of off-patent medicines should not be underestimated in those countries, where accessibility of patients to patented medicines in restricted.

PCV157

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

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OBJECTIVES: The objective of generic drug policies can be defined as reduction in health care expenditure without compromising health outcomes. This 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. This is based on the disinvestment aspect of drug policies.

Methods: 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 +/−3 years before and after first generic entry. RESULTS: In this analysis we present the case of clopidogrel. 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 4-fold of the volume entry in both countries, by 30.1% in Germany and by 59.5% in Hungary. CONCLUSIONS: In Germany off-patent clopidogrel generated significant savings without volume increase. In Hungary generic products significantly increased in market share with introduction of generic clopidogrel, in addition to reducing pharmaceutical expenditure. Incremental health gain of off-patent medicines should not be underestimated in those countries, where accessibility of patients to patented medicines in restricted.

PCV158

LOCAL VARIATION IN PRIMARY CARE PRESCRIBING BEHAVIOR IN ENGLAND: TICAGRELOR

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OBJECTIVES: To understand the level of local variation in community-level prescribing of ticagrelor in England, after national-level recommendation from NICE. METHODS: GP Practice-level prescribing data for ticagrelor (a GP Practice-level prescribing data for ticagrelor (a GP Practice-level prescribing data for ticagrelor (a GP Practice-level prescribing data for ticagrelor) was studied as part of a larger project which reviewed evidence for antplatelet drugs (Chapter 2.9 of British National Formulary [BNF]) in England, between August 2011 and February 2013. Data was obtained from the Health and Social Care Information Centre (HSCIC) and analysed in Statistix Software (SAS). The percentage of total antplatelet spend (net ingredient cost) attributed to ticagrelor was calculated for each GP Practice and Clinical commissioning Group (CCG) cluster. RESULTS: Despite national-level NICE guidance on Ticagrelor, the objective of generic drug policies can be defined as reduction in health care expenditure without compromising health outcomes. This is based on the disinvestment aspect of drug policies. 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 +/−3 years before and after first generic entry. RESULTS: In this analysis we present the case of clopidogrel. 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 4-fold of the volume entry in both countries, by 30.1% in Germany and by 59.5% in Hungary. CONCLUSIONS: In Germany off-patent clopidogrel generated significant savings without volume increase. In Hungary generic products significantly increased in market share with introduction of generic clopidogrel, in addition to reducing pharmaceutical expenditure. Incremental health gain of off-patent medicines should not be underestimated in those countries, where accessibility of patients to patented medicines in restricted.

PCV159

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

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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). METHODS: A retrospective cohort study was conducted using the MarketScan® plus Earlyview data from 1/1/2009 to 12/31/2013. Adult NVAF patients (ICD-9 code 427.31 or 427.32) with one year of baseline period and at least 6 months of follow-up in the use baseline period for at least 3 months immediately before the index date (defined as the first NOAC claim) were included. Patients with a history of continuous warfarin use in the baseline period for at least 3 months immediately before the index date (defined as the first NOAC claim) were included. Patient characteristics were compared using Pearson’s chi-squared test while continuous variables were compared using Wilcoxon signed-rank test. RESULTS: Among 11,743 eligible patients, 421 (3.64%) switched to apixaban, 8,898 (76.55%) to dabigatran and 2,327 (19.81%) to rivaroxaban.