

prior and after the implementation of 5 selected policies of the HTP. The analysis was conducted for total imported pharmaceutical (IP) sales and total locally manufactured pharmaceutical (LMP) sales in the A0. The Durbin-Watson d statistics of SPSS version 20.0 was used as a test for serial correlation of error terms. Shift in slope with  $p < 0.05$  was considered as statistically significant. **RESULTS:** All policies effected the LMP sales more positively than IP sales except FP. However, the difference of impact was moderately positive for LMP sales, there was not any statistically significant change. **CONCLUSIONS:** Policy changes may effect at differently direction and amount the cost sales of LMPs and IPs. Non significant effect of these policy changes may partly explained by limited observation time and by other market dynamics.

#### PHP35

##### CHARACTERISTICS OF THE MEDICINES WHICH HAVE ANNUAL AVERAGE HIGHEST AMOUNT OF SALES OF BETWEEN YEARS 2008-2013

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**OBJECTIVES:** In 2003 Health Transformation Program and in 2006 Social Security Reform were launched in Turkey. At the end of the years 2009 and 2011 price cuts were done by the Government and between the years 2010-2012, there was a global budget implementation in Turkey. Health implications of these developments in the medicine market have not been analyzed in a comprehensive manner. The top 100 medicines, annual average highest amount of sales of between 2008-2013, had one to four of the total pharmaceutical market value in 2013. In this study we aimed to determine these first 100 medicines, which have higher total sales amount, defining characteristics. **METHODS:** While pharmaceutical sales data were obtained from the IMS Health-Turkey data base, characteristics of medicines were obtained from the Turkish Medicine And Medical Devices Agency and the Social Security Agency data bases. **RESULTS:** While 78 medicines are original, 22 medicines are generic. 60 medicines are imported medicines, 40 medicines are manufactured medicines. 19 medicines are biotechnological medicines and all of these biotechnological medicines are original and imported. 96 medicines covered by Social Security payments. Equivalent of 65 medicines are available (each equivalent group from 1-30, an average of 13 generics available). 19 medicines and 15 medicines are respectively systemic anti-infectives and antineoplastics and immunomodulating agents. In this study, the license holders of the medicines are 40 firms in total. 15 firms have a market share of 75% and the medicines which, have 77,7% portion of total amount, are created by multinational firms. **CONCLUSIONS:** In the years which were the effects of reforms, price cuts and global budget implementation seen, the medicines which have higher total sales amount were mostly original, imported, covered by Social Security payments and created by multinational firms.

#### PHP37

##### IMPACT OF HEALTH POLICY CHANGES ON UNIT SALES OF 5 TOP SELLING ATC1 PHARMACEUTICAL GROUPS IN TURKEY

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**OBJECTIVES:** Turkish Ministry of Health (MoH) initiated Health Transformation Program (HTP) in 2002. HTP impacted all clinical and economic outcomes of health including pharmaceutical sales by improving access to health services. The objective of this study is to understand the differences in the impact of selected 5 policies on 5 top selling ATC1 groups in terms of unit sales (US) in the respective periods. **METHODS:** 132 months sales data with segmented regression analysis for interrupted time series were used. International reference pricing of pharmaceuticals (RF), mandatory reimbursement dossier submission for new molecules, new indications and line extensions with medical and economic evaluations (MRDS), auditing for good manufacturing practice (GMP), family physician system (FP) and compulsory medical service for physicians (CMS) were selected as five major policies that may affect cost, demand and supply of pharmaceuticals. We analyzed possible breaks in trends prior and after the implementation of 5 selected policies of the HTP. The top 5 selling ATC1 groups were Systemic Antineoplastics (J0), Cardiovascular System (C0), Alimentary and Metabolism (A0), Respiratory (R0) and Central Nervous System (CO). The Durbin-Watson d statistics of SPSS version 20.0 was used as a test for serial correlation of error terms. Shift in slope with  $p < 0.05$  was considered as statistically significant. **RESULTS:** There was an increasing trend for all ATC1 groups prior the implementation of policies. The trends in J0 were negatively impacted from all policies except for RF. The C0 group was negatively impacted from all policies except for RF and CMS. The A0 group was positively impacted from all policies. The N0 was positively impacted from all policies except MRDS and FP. The R0 group was positively impacted from all policies except GMP and FP. **CONCLUSIONS:** Policy changes were not sufficient to control unit growth of top selling pharmaceutical groups. The effect of other policies to control unit sales of these group should also be evaluated.

#### PHP38

##### APPLICABILITY OF TURKISH PRICING POLICY ON PRICE INCREASES

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**OBJECTIVES:** Turkey is using international reference pricing for the pharmaceuticals. An update for Turkish pricing decree is published in April 2012 and price increases became more applicable due to various reasons. We analyzed price lists to identify pharmaceutical products that had any price increase in 2013 and defined causes in the decree. **METHODS:** We reviewed weekly cumulative price lists published in Turkish Medicines and Medical Device Institution and compared each list with the list published in the previous week to identify products that had price

increase. We excluded "plasma-derived blood products" that has different pricing schemes for the cases they get an exchange rate related increase and also excluded the price corrections. Price increase reasons were grouped as defined in the current decree. We calculated mean percentage of price increases in overall and in original vs. generic, import vs. locally manufactured, products below and above 6.79 TL pack price (local definition of cheap products) and ATC1 level subgroups. **RESULTS:** 606 products and 274 molecules had price increase in 2013. The most frequent reasons for price increase were related critical product status (110 increases), increase in reference price (105 increases) and due to the rule of getting the highest reference for delisted or non-reimbursed products (89 increases). The average rate of price increases was 23.1%. 57% of the price increases were applied to imported products compared with 43% locally manufactured ones. Average rate of price increase in original and generic products were 24% and 21% respectively. Products with ex-factory price above 6.79 TL had more price increase compared with cheap products. The highest rate of price increases were in ATC1 groups A and B (81 increases each). **CONCLUSIONS:** With the pricing policy change in 2013, price increases were possible in Turkey for products from different groups.

#### PHP39

##### THE GRASS IS ALWAYS GREENER ON THE OTHER SIDE OR WHY THERE IS LITTLE MEANING IN INTERNATIONAL PHARMACEUTICAL PRICE COMPARISON

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**OBJECTIVES:** In many countries there is an ongoing debate about pharmaceutical pricing. Especially in Germany there is common belief that pharmaceuticals are more expensive than in other countries. Payers are making use of this belief when negotiating prices with pharmaceutical companies. We wanted to know if there is scientific evidence for this conception. **METHODS:** We conducted a systematic literature review in order to identify price comparison studies comparing Germany with at least three other countries. We searched Pubmed and six other databases to identify relevant articles published between 1998 and today. Furthermore we developed a quality rating tool based on the approaches from Andersson (1993) and Danzon/Kim (1998). **RESULTS:** Our review delivered 4.927 articles from which 28 met our inclusion criteria. Study quality was quite heterogeneous, ranging from 3 to 13 points with an average score of 8.8 out of 15. Some studies use old data back from 1992 and no study considers the recent changes in German legislation (AMNOC). In addition no study includes rebates and selection of compared pharmaceuticals is often arbitrary. Reviewed studies report German pharmaceutical prices slightly above international average. High quality studies (upper quartile, quality score: >9) find German prices below international average, whereas low quality studies (lower quartile, quality score: <7) find German prices above international average. **CONCLUSIONS:** Results of the review suggest that there is a misconception of pharmaceutical pricing in Germany. Within a price comparison study any desired result can be achieved by deliberately choosing different approaches. At the end of the day payers and policy makers should stop comparing prices with other countries. Instead resources should better be spent on making value based reimbursement decisions in the respective health care setting.

#### PHP40

##### TRANSFORMATION OF GREEN CARD PROGRAM FOR THE POOR: ONE STEP FURTHER TO UNIVERSAL HEALTH CARE COVERAGE IN TURKEY

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**OBJECTIVES:** Since January 2012, Turkish government started to implement a mandatory general health insurance law. The Social Security Institution (SSI) coverage which has been 86% in 2012 was expected to be 100% after this reform instead has declined to 82% in 2013. On the other hand, as Turkish Green Card Program - a state social scheme to ensure the provision of health services for the poor - was abolished and transferred from Ministry of Health to SSI, approximately 9 million people have been subject to income audit in order to be classified as eligible to pay premiums themselves and non-eligible ones for which the state will pay the premiums. In this regard; this poster presents this transformation and gives its current status in terms of contribution to Universal Health Coverage in Turkey. **METHODS:** Publications of SSI, World Bank Reports and online articles are utilized. **RESULTS:** The recent available data shows that 82% of the population is under the coverage of SSI. %2 of the population corresponds to the groups which are out of SSI coverage according to Law 5510, Article 60. Remaining population corresponds to 12 million people subject to income audit. Approximately 62% of those could not pass income audit and their premiums are paid by the state. **CONCLUSIONS:** Since 2012 there are increasing number of people taking income audit and have the capacity to pay premiums. It is also noteworthy to state that there were 8,865,470 people under Green Card scheme whereas after the transfer of Green Card to SSI; 11,357,306 people applied for the income audit in 2012, this reached to 12,266,043 people at the beginning of 2014. Findings show that as Green Card Scheme brought under SSI, coverage has been made available to all eligible people in a systematic and just way thus contributed the extent of coverage in Turkey.

#### PHP41

##### GENERIC PENETRATION WITHIN TOP-10 GENERICIZED MOLECULES - GREECE VERSUS MAJOR EUROPEAN COUNTRIES

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**OBJECTIVES:** In early 2010, Greece was placed under International Supervision (EU, ECB and IMF), as a result of a growing public deficit and its non-sustainable state expenditure. At the time, the retail pharmaceutical market had a size of c. a. €6.5 bn in retail prices (public pharmaceutical expenditure €5.2 bn). Within that framework,