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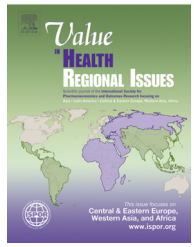

Investigating the Economic Impacts of New Public Pharmaceutical Policies in Greece: Focusing on Price Reductions and Cost-Sharing Rates

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ABSTRACT

Objective: Since 2010, cost-containment efforts in Greece focused on the reduction of public pharmaceutical expenditure. Changes in cost-sharing levels, reductions in prices, and generic substitution are some of the measures implemented after the second quarter of 2012. The objective of this study was to investigate the economic impact of the measures on public funds and households. **Methods:** Data on volume and value for prescribed drugs for each therapeutic category and cost-sharing levels were obtained from the National Organization for Health Care Services Provision (EOPYY), the main reimbursement agency covering 95% of the population. Four different periods were compared, taking into consideration the implementation of different regulation, data availability, and disease seasonality. The periods compared were January-March 2012 versus January-March 2013 and April-August 2012 versus April-August 2013. **Results:** In 2013, only 8% of prescribed drug boxes were provided with 0% cosharing arrangement versus 13% in 2012. A 25% cost-sharing level was imposed on 77% of the prescribed medicines in 2013 compared with 53% in 2012. Consequently, the mean cost-sharing burden for pharmaceuticals in 2013 was estimated at 18% versus 13.3% in 2012. The average price per package declined in 2013 by 28%, from €17.8 in 2012 to €12.8 in 2013. Major (>50%) savings were achieved in cardiovascular and nervous system drugs, accounting in volume for almost 60% of total pharmaceutical consumption. **Conclusions:** The economic results of the measures for third-party payers were positive. The measures, however, should be reconsidered and examined more closely considering social effects, such as accessibility, especially for vulnerable groups in need of essential pharmaceutical care.

Keywords: cost-sharing levels, pharmaceutical prices, public pharmaceutical policies.

Introduction

Many European countries are witnessing a consistent rise in public pharmaceutical spending. After the United States, the European Union (EU) is the second biggest pharmaceutical market, with a 27% share of worldwide sales, totaling €192 billion in 2010 [1]. Policymakers believe that by regulating pharmaceutical markets correctly, considerable savings can be achieved without compromising the quality of care. At the European level, numerous best practices in pharmaceutical sector regulations are examined to increase value for money in pharmaceutical consumption [2].

In this frame, governments of EU countries are adopting cost-containment measures, mostly targeting the supply side [3]. Regulations concerning pricing, reimbursement, market entry, and expenditure control were introduced, as well as specific policies targeted at the distribution chain, physicians, and patients.

In Greece, public pharmaceutical expenditure was high (compared with that in other EU countries) and marked a considerable increase during the last decade. It rose by 73% from €3 billion in 2005 to €5.2 billion in 2009 [4,5]. That was why public pharmaceutical expenditure was targeted by the Troika (the European Central Bank, EU, and International Monetary Fund) in an effort to approach Eurozone levels. By 2011, it had fallen to €4 billion (1.9% of gross domestic product) and 2012 closed at €2.88 billion (1.48% of gross domestic product), declining by 44.6% since 2009 [6]. For 2013 and 2014, the targets set were €2.371 billion and €1.944 billion, respectively, leading to a cumulative decline of 62.6% since 2009 as projected by the 2012 Memorandum of Understanding [7].

To achieve these savings, a set of measures was implemented specially after the second quarter of 2012. These measures include the following: changes in cosharing levels, price reassessment, use of generics, and positive list implementation with average price per Anatomical Therapeutic Chemical

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Classification System classification [8]. In 2012, physicians were asked to prescribe drugs by active substance, and they were wallowed to use brand names in only specific cases (e.g., patients with allergic reactions, transplantation, and immune-suppression). In addition, the electronic prescription system for pharmaceuticals became obligatory in 2012 aiming at rationalizing prescribing levels (http://www.idika.gr). The current existing copayment levels in Greece are 0% for life-threatening diseases, 10% for chronic diseases, and 25% for all other types of diseases.

Because several policy measures were implemented during 2012-2013, the objective of this study was to investigate the economic impact of price reductions and cost-sharing levels on pharmaceutical expenditure in Greece from the perspective of Social Security (the National Organization for Health Care Services Provision [EOPYY]) and Households.

Methods

Data on volume and expenditure for drugs prescribed for each therapeutic category (Anatomical Therapeutic Chemical Classification System) and cost-sharing level were derived from the EOPYY database, the main Social Security fund covering almost 95% of the Greek population. Four different periods were compared, taking into consideration the implementation of regulation, data availability at that time (January 2012 to August 2013), and disease seasonality.

The periods compared were January-March 2012 versus January-March 2013 and April-August 2012 versus April-August 2013. The certain periods (based on data availability at that time) were selected according to price reassessments, cost-sharing levels, and reimbursing regulations during the respective periods. Changes in reimbursement levels were taken into account when determining the "pairs" of compared periods.

Until October 2012 (covering both the periods January–March 2012 and April–August 2012), prescribing was based on brand names, with patients covering only the statutory cost-sharing rates. During the period November 2012 through March 2013 (covering the period January–March 2013), apart from the cost-sharing payments, the patient had to fully cover the difference between the retail price and the reimbursement price of a prescribed drug. During the period April through August 2013, however, a different regulation provided that cost was equally distributed between households and EOPYY.

Regarding cost-sharing levels of pharmaceuticals, there were increases for most of the therapeutic categories since March 2012. The increases are reported analytically in the "Results" section. Major regulations during the studied periods are presented in Table 1.

For each therapeutic category (Anatomical Therapeutic Chemical Classification System) we estimated the following: 1) the distribution of consumption (in volume) according to various cost-sharing levels (0%, 10%, 25%); 2) the average cost-sharing level; 3) the mean price per package; and 4) the average monthly pharmaceutical expenditure of EOPYY and households.

Table 1 – Description of the major regulations that have been implemented in the study periods.

Study periods	Major regulations
First period (January–March 2012)	Gazette 497/28.02.2012: reassessing cost-sharing levels (increases)
Second period (April–August 2012)	Gazette 545/01.03.2012 (pg 10661–10662): a) implementation of the electronic prescribing system from June 1, 2012 b) Prescription based on active substance from June 1, 2012 (pilot April 1, 2012). The cheapest drug for each active substance is covered by Social Security funds. In case a patient chose a more expensive drug, he or she had to pay the difference from the cheapest one with the same active substance Gazette 983/30.03.2012 (pg 17079–17084): reassessing pharmaceuticals' prices Gazette 1814/08.06.2012: reassessing cost sharing levels
Third period (January–March 2013)	Gazette 2719/08.10.2012: reassessing pharmaceuticals' prices Gazette 2793/16.10.2012: reassessing pharmaceuticals' prices (generics' prices reductions) Gazette 2825/19.10.2012: reassessing pharmaceuticals' prices (off-patent and generics' prices reductions) Gazette 2883/26.10.2012 (pg 44547–44548): reassessing cost-sharing levels Gazette 2912/30.10.2012 (pg 44775–44778): reassessing positive list and introduction of reference prices per ATC. In case the retail price of a drug was cheaper than the reference price, the difference was deducted from the patient's cost sharing. In case the difference between the retail price and the reference price was equal or higher than the patient's cost sharing, the patient did not pay anything Gazette 3047/16.11.2012: reassessing positive list Gazette 3057/18.11.2012 (pg 46543): reassessing the prescribing system on the basis of the active substance (setting some exceptions) Gazette 3165/28.11.2012: reassessing positive list Gazette 3356/17.12.2012 (pg 49860a–49860b): introduction of reimbursement prices. Patients have to pay half of the difference between the retail price and the reimbursement price. In case the retail price of a chosen drug is equal or lower than the reimbursement price, patient pays only the cost-sharing levels. It was implemented from March 26, 2013, to September 9, 2013 Gazette 43/15.01.2013 (pg 1003-1004): reassessing cost-sharing levels

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Results

Changes in Cost-Sharing Levels

As shown in Fig. 1 and Table 2, higher cost-sharing levels were imposed on all therapeutic categories except hormones. More specifically, in 2013, only 8% of the prescribed drugs were provided at no cost-sharing level versus 13% in 2012. In addition, a 25% cost-sharing level was imposed on 77% of the prescribed