Professional article
Medicus 2008; 8(4): 144-146 UDK 615.2(497.11) "2004-2007" Stručni rad

FINANCIAL ANALYSIS OF CONSUMPTION OF THE PRESCRIPTION DRUGS CHARGED TO THE COMPULSORY HEALTH INSURANCE FUND

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FINASIJSKA ANALIZA POTROŠNJE LEKOVA NA RECEPT NA TERET SREDSTAVA OBAVEZNOG ZDRAVSTVENOG OSIGURANJA

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Received/Primljen: 07. 11. 2007. Accepted/Prihvaćen: 26. 12. 2007.

ABSTRACT

Analysis of consumption of the prescription drugs charged to the Republic Health Insurance Fund (RHIF) in the period from 2004 to 2007, in the light of the revised Drug List, epidemiology, population aging, and the role of the Pharmacoeconomic Board within the Republic Health Insurance Fund. Prescription drugs consumption from the financial aspect is given per capita per regions. Analysis of the causes for increased liabilities of the Republic Health Insurance Fund regarding the Drug List is also made. By analyzing the year 2006, we can conclude that the top five regions in drug consumption in absolute amounts are: Belgrade RSD 4,487,183,426, Novi Sad RSD 1,434,690,900, Nis RSD 1,062,613,561, Kragujevac RSD 841,360,884 and Pancevo RSD 716,429,033. In analysis per capita, the top five regions are: Zajecar RSD 3,305, Beograd RSD 2,847, Kragujevac RSD 2,816, Nis RSD 2,654 and Sombor RSD 2,545. The data obtained through this analysis illustrate that the reasons for the Drug List cost increase are the following: epidemiological situation, old population (40.2 years on average); absence of treatment guide lines, higher drug prices, bad habits, poverty, risk factors, insufficient protection at work by employers and inactivity of Pharmacoeconomic Board of RHIF which is in charge of the impact of drug policy on the budget. Pharmacoeconomic analyses are mandatory in many countries and voluntary in others, but no yet in Serbia.
Key words: drug cost, insurance, economics

SAŽETAK

Analiza potrošnje lekova na recept na teret sredstava Republičkog zavoda za zdravstveno osiguranje (RZZO) u periodu od 2004. do 2007.godine, u svetlu izmene Liste lekova, epidemiologije, starenja stanovništva i uloge Komisije za farmakoekomiju pri Republičkom zavodu za zdravstveno osiguranje. Prepisivanje lekova na recept sa finansijskog aspekta per capita po okruzima. Analiza razloga za povećanje obaveza Republičkog zavoda za zdravstveno osiguranje u vezi Liste lekova. Analizirajući 2006. možemo da zaključimo da su da su prvih pet okruga po potrošnji lekova u apsolutnom iznosu: Beograd RSD 4.487.183.426, Novi Sad RSD 1.434.690.900, Niš RSD 1.062.613.561, Kragujevac RSD 841.360.884 i Pančevo RSD 716.429.033. Analizirajući per capita, prvih pet okruga su: Zaječar RSD 3.305, Beograd RSD 2.847, Kragujevac RSD 2.816, Niš RSD 2.654 i Sombor RSD 2.545. Podaci dobijeni ovom analizom ilustruju da su razlozi za povećanje troškova Liste lekova sledeći: epidemiološka situacija, starenje stanovništva (prosek 40,2 godine), odsustvo medicinsko doktrinarnih standarda, više cene lekova, loše navike - siromaštvo i faktori rizika, nedovoljna zaštita na radu od strane poslodavca i neaktivnost Komisije za farmakoekonomiju RZZO koja je nadležna za uticaj politike lekova na budžet. Farmakoekonomske analize su obavezne u mnogim zemljama, dobrovoljne u ostalim, ali ne i u Srbiji.
Ključne reči: trošak za lekove, osiguranje, ekonomija

INTRODUCTION

It is important to understand differences in the sociodemographics characteristics of the institutionalized versus community-dwelling beneficies, as many of these differences may represent differences in disease burden and severity-of-illness which, in turn, drive patterns of pharmacologic use and spending (1). The extent of existing differences in drug use patterns between these two disparate beneficiary groups may in turn be important distinctions for policy-makers as they implement modifications to current drug policy (2, 3).

In neighbouring countries the situation is similar (4, 5). In Bulgaria (compulsory health insurance, positive list of medicines), the prices of drugs are constantly rising and the share of pharmaceuticals in overall government health spending has increased. In Croatia, health care costs (including medicines) have risen rapidly too. They have state compulsory insurance and voluntary additional insurances (covering expensive drugs) provided by public and private institutions. The situation in Romania is mostly the same, having three levels of reimbursement established for different categories of drugs.

The aim of our study was analysis of: consumption of prescription drugs charged to the Health Insurance Fund in the period from 2004 to 2007, in the light of the revised Drug List, epidemiology, population aging, and the role of the Pharmacoeconomic Board within the Republic Health Insurance Fund, prescription drugs consumption from the financial aspect per capita per regions, as well as analysis of the causes for increased liabilities of the Republic Health Insurance Fund regarding the Drug List.

MATERIAL AND METHODS

Data for this analysis were drawn from the Republic Health Insurance Fund of Serbia, Public Health Institute of Serbia, Statistical Office of the Republic of Serbia and National Bank of Serbia (6-8).

Statistic data are processed by means of uniform statistic forms and electronic invoice system (EIS) containing data on all contracted pharmacy institutions and pharmacies on the entire territory of the Republic of Serbia in charge for granting the right of insured citizens for prescribed drugs from the Drug List. Invoices for prescribed drugs are updated every 15 days.

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We have obtained the drug costs and prescription guidelines from the Drug List adopted by the Health Insurance Fund (Positive list of medicines) (6).
Socio-medical data used in this text are published by the Ministry of Health and the Public Health Institute of Serbia (table 1) (1, 2).

Table 1. Mean age of population by sex and censuses, 1948 –2002.

Year	Total	Women	Men
1948	29.3	30.2	28.4
1953	29.9	30.8	29.0
1961	31,3	32,1	30,4
1971	33,6	34,5	32,7
1981	35,4	36,3	34,5
1991	37,0	38,0	35,9
2002	40,2	41,5	39,0

the source: Statistical Office of the Republic of Serbia

RESULTS

In 2004, the total drug liabilities for the Republic Health Insurance Fund of Serbia (HIF) were RSD 9,055,913,714 (EUR 114,798,932), RSD 1.207 per capita (EUR 15.31), in 2005, total drug liabilities were RSD 14,378,180,321 (EUR 168,165,851), RSD 1,917 per capita (EUR 22.42), in 2006, total drug liabilities were RSD 18,192,945,134 (EUR 230,290,445), RSD 2,425 per capita (EUR 30.70), and in the first 9 months of 2007 RSD 16,154,299,762 (EUR 204,847,828).
The analysis of drug prescription by the regions of the country was presented in the table 2 and figure 1.

Table 2. Drug consumption in the region during the year 2006.

Nr	Region	Amount in RSD
1	Beograd	4,487,183,426
2	Novi Sad	1,434,690,900
3	Nis	1,062,613,561
4	Kragujevac	841,360,884
5	Pansevo	716,429,033
6	Uzice	698,795,850
7	Kraljevo	659,241,825
8	Sabac	648,948,032
9	Sremska Mitrovica	642,432,490
10	Sombor	544,726,876
11	Cacak	522,895,672
12	Leskovac	522,700,180
13	Krusevac	516,717,670
14	Jagodina	490,315,737
15	Zrenjanin	487,888,396
16	Vranje	464,571,198
17	Subotica	454,590,627
18	Pozarevac	433,551,130
19	Smederevo	400,065,779
20	Zajecar	393,351,510
21	Valjevo	375,518,033
22	Bor	370,131,018
23	Kikinda	335,495,516
24	Prokuplje	237,682,008
25	Pirot	236,037,739
26	Kosovska Mitrovica	144,608,853
27	Gracanica	38,335,876
28	Gnjilane	32,065,304

If we predict the same epidemiology as in 2006, we could expect the total liabilities by the end of 2007 to be RSD 21,539,066,350 (EUR 273,130,438) and RSD 2,870 per capita (EUR 36.40). There is a significant increase of liabilities from 2004 to 2007 by 137.75% in real figures.
Analyzing per capita, the top five regions are:
Zajecar RSD 3,305, Beograd RSD 2,847, Kragujevac RSD 2,816, Nis RSD 2,654, Sombor RSD 2,545.

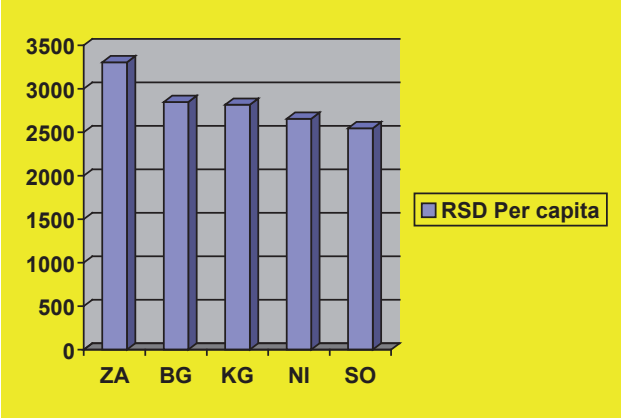

Figure 1. Analyzing per capita in the top five regions; ZA-Zajecar, BG-Belgrade, KG-Kragujevac, NI-Nis, SO-Sombor; RSD-Republic of Serbia Dinar.

DISCUSSION

The data obtained by this analysis illustrate that the reasons for the Drug List cost increase are the following: epidemiological situation- 24.1% of the adult population take antihypertensive drugs (21% in 2000), 26.8% of adult population suffer from a chronic decease or have a health problem, which is a considerable increase in comparison to 2000 (17.6%), 35.6% of the adult population take psychoactive substances, which also represents an increase, 43.9% are under stress; old population (40.2 years in average); absence of medical doctrine standards (guidelines not applicable in practice); higher drug prices (every six month updated by the Government, on higher level mostly); bad habits- poverty and risk factors: smoking, lack of physical activity, overweight and generally poor quality of life -18.3 % of population are overweight, 36% are pre-overweight and 2.3% are undernourished, 67% of population are exposed to a cigarette smoke in their own home and 44.9% in the office, 57.4% are alcohol consumers, representing a 5% increase. 62% of population have not changed their habits of living after being advised to do so.
Generally, compared to 2000 (6.5%), percentage of population that describe their health as bad has increased (12.6%) and the number of ones who describe it as very good has decreased (from 21.4% to 13.8%) (1, 2). Insufficient protection at work by employers and inactivity of Pharmacoeconomic Board of RHIF, which is in charge of the impact of drug policy on the budget, are also problems.
Despite of implementation of co-payment in the drug price by the insurees (25–75% on retail prices, List A-

1), RHIF liabilities for drugs are going to be bigger and bigger.

Pharmacoeconomic analyses are mandatory in many countries; Norway, Sweden, Finland, Netherlands, UK, Portugal, Australia, Canada, New Zealand, but voluntary in Denmark. The authorities' demand for pharmacoeconomic documentation is increasing.

A necessary step that has to be made is adoption of national strategy for Drug Policy, and its obligatory implementation in practice. For example, in the United States, they found that the only way to decrease financial drug expenditure reimbursed by the funds is to replace original expensive drugs with generics (9, 10).

ACKNOWLEDGMENTS

The author would particularly like to thank Professor Dr. Slobodan Janković, Medical Faculty-University in Kragujevac for his suggestions and comments.

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