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STUDY OF CHANGES IN APPENDIX 3 OF THE POSITIVE DRUG LIST IN BULGARIA

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Abstract: The public nature of health care obliges the state to conduct a consistent policy that aims to ensure the protection of human health with optimal use of public funds. Achieving better management in the health care system is in the interest of individuals and society as a whole. And decisions in health care, as in any other area of human activity, must be economically rational, since all economic goods, including those related to health care, are limited in nature.

The medicinal products included in Appendix 3 of the Positive Drug List have a reimbursement level of 100% and are negotiated and paid for from the budget of the Ministry of Health. These are medicinal products intended for the treatment of AIDS, infectious diseases, diseases outside the scope of the Health Insurance Act, paid according to a certain order of the Health Act, as well as vaccines for mandatory immunizations and re-immunizations, vaccines for special indications and in emergencies circumstances, specific sera, immunoglobulins.

The purpose of the present study is to perform a comparative analysis of the changes in the reference values of the medicinal products included in Appendix 3 of the Positive Drug List.

Methodology: The following research methods were used - documentary method, economic analysis, comparative analysis, statistical methods - analysis of the dynamics of phenomena and tabular analysis to visualize the obtained results.

Results and analysis: From the research done, it is clear that for the period 2016-2019 only a decrease was observed, while for 2020 there was also an increase in the reference values of some medicinal products included in Appendix 3 of the Positive Drug List, the reasons for this being exclusion of a medicinal product from the list, increase in the price of a medicinal product and new grouping of medicinal products by therapeutic indication.

Conclusion: Medicines are of fundamental importance in maintaining life, improving its quality and alleviating suffering. This determines the need to ensure equal access to medicinal products for citizens, according to their needs and regardless of their financial capabilities.

Keywords: *Appendix 3, Positive Drug list, medicinal products, Ministry of Health, public funds*
Field: 3) Medical sciences and Health

INTRODUCTION

Health care aims to improve the condition of people. Patients can directly benefit from therapy, but there are also a number of health measures that have an impact on health in general, for example immunizations, treatment of infectious diseases, etc. [16]

Expenditure on medicines is the third largest component of the health budgets of the Member States of the European Union. Spending on healthcare and medicines continues to rise as a percentage of Gross Domestic Product (GDP) across the EU. This creates sustainability issues; there is an urgent and growing need to contain rising health care costs, including for drugs, and to use limited resources effectively.

GDP per capita and health care spending per capita are highly correlated. Although GDP per capita and drug spending per capita are also related, some of the Member States that spend the most on drugs do not have the highest total healthcare spending. [1]

According to a report by the Organization for Economic Co-operation and Development (State of Health in the EU Bulgaria Country Health Profile 2021) in 2019 in Bulgaria, healthcare costs per capita (adjusted for differences in purchasing power) were 1,273 euros , i.e. the lowest in the European Union. However, health spending per capita has increased significantly over the past decade, growing by 83% between 2009 and 2019, compared to just 28% in the EU as a whole. Measured as a share of the Gross

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Domestic Product, healthcare expenditure in Bulgaria amounts to 7.1%, which is below the EU average of 9.9%, but more than 11 other EU countries with comparable levels of healthcare expenditure of head of population. The COVID-19 emergency has also led to additional funding in 2020 to support the health sector. [14]

After the costs of hospital care, medicines are the second dominant pillar of healthcare expenditure in Bulgaria: although in absolute terms the expenditure per head of the population is more than 25% lower than the corresponding expenditure in the EU as a whole, medicines account for the largest share of expenditure among EU countries — 36.1%, which is twice the average for the entire European Union. [14]

The public nature of health care obliges the state to conduct a consistent policy that aims to ensure the protection of human health with optimal use of public funds. Achieving better management in the health care system is in the interest of individuals and society as a whole. And decisions in health care, as in any other area of human activity, must be economically rational, since all economic goods, including those related to health care, are limited in nature. [17]

Historically, the creation of the Positive Drug List (PDL) in Bulgaria dates back to 2003, when with two changes in the regulations (in the Law on Health Insurance and the Law on Medicinal Products in Human Medicine) a commission was formed to draw up a positive drug list , which will be the basis for subsequent compilation of all other lists of medicines paid for by public funds or used for the purposes of supplying medicines [17]

After the accession of Bulgaria to the European Union in 2007 and the publication of a new Law on Medicinal Products in Human Medicine, a new Ordinance on Medicinal Products was published (Ordinance on the conditions, rules and criteria for inclusion, changes and/or exclusion of medicinal products from the Positive Drug List and the terms and conditions for the work of the commission on the Positive Drug List, Promulgated SG No. 110 of December 21, 2007)

Currently, according to the Law on Medicinal Products in Human Medicine, the Positive Drug List includes medicinal products dispensed on prescription and paid for with funds from the budget of the National Health Insurance Fund, from the state budget outside the scope of compulsory health insurance, from the budget of medical institutions, specifically indicated in The law on medical facilities.

The Positive Drug List includes medicinal products classified by pharmacological groups according to the code of anatomic-therapeutic-chemical classification, with the corresponding international non-proprietary names, the names belonging to them, with the corresponding defined daily dose/therapeutic course, price, marginal price of the medicinal products at the time of sale their retail value, reference value for a defined daily dose/therapeutic course, package value calculated on the basis of a reference value/therapeutic course for a defined daily dose, payment level, therapeutic indications and international disease code (ICD). For medicinal products, the reference value is determined on the basis of a certain defined daily dose or therapeutic course, or concentration or volume. [2]

Medicinal products in the Positive Drug List are selected according to evidence of efficacy, therapeutic effectiveness, safety and analysis of pharmacoeconomic indicators, and for medicinal products with a new international non-proprietary name, an assessment of health technologies is also carried out.

The Ministry of Health pays for the designated medicinal products with a new international non-proprietary name (INN) if, prior to their inclusion in the Positive Drug List, a preliminary framework agreement has been concluded between the Ministry of Health and the holder of the authorization for use/his authorized representative regarding the maximum value up to which the respective a medicinal product may be supplied to the Ministry of Health in accordance with the Law on Public Procurement. The agreement is binding on the parties to it.

The Ministry of Health is responsible for the overall organization and functioning of the health system (for health legislation, the coordination and management of multiple subordinate institutions, the planning and regulation of health service providers, and the financing of specific types of health services).

The medicinal products included in Appendix 3 of the Positive Drug List have a reimbursement level of 100% and are negotiated and paid for from the budget of the Ministry of Health. These are medicinal products intended for the treatment of AIDS, infectious diseases, diseases outside the scope of the Health Insurance Act, paid according to a certain order of the Health Act, as well as vaccines for mandatory immunizations and re-immunizations, vaccines for special indications and in emergencies circumstances, specific sera, immunoglobulins.

Purpose

The Purpose of the present study is to perform a comparative analysis of the changes in the reference values of the medicinal products included in Appendix 3 of the Positive Drug List.

MATERIALS AND METHODS

The following research methods were used: Documentary method - on the basis of official annual reports on the activity of the National Health Insurance Fund (NHIF), annual reports on the activity of the National Council on Prices and Reimbursement of Medicinal Products (NCPRMP), annual reports of the Ministry of Health (MH) on the state of health of citizens and the implementation of the National Health Strategy, reports, publications of the Medicines Executive Agency, scientific publications on the problem in national and international literary sources; Economical analysis; Comparative analysis; Statistical methods – analysis of the dynamics of the phenomena, tabular analysis for visualization of the obtained results.

RESULTS

The dynamics in the change of the reference value for DDD/therapeutic course of the medicinal products, paid with funds from the budget of the Ministry of Health, were evaluated.

The analysis, prepared on the basis of reports from the Ministry of Health, NHIF and NCPRMP for the period 01.01.2016 - 31.12.2020 shows the following results:

Table 1. Changes in the reference values of medicinal products included in Appendix 3 of the Positive Drug List

Years	**Reduction of the reference value for DDD* according to INN**		**Increasing the reference value for DDD by INN**
	number of INNs	***%***	***number of INNs***
2016	9 INNs	0.1% - 22.2%	-
2017	11 INNs out of a total of 29 INNs	0.2% - 53.42%	-
2018	13 INNs out of a total of 27 INNs	0.2% - 58.02%	-
2019	12 INNs out of a total of 29 INNs	0.23% - 55.87%	-
2020	12 INNs out of a total of 74 INNs	0.07% – 9.92%	16 INNs

Sources: Annual reports on the activity of the NCPRMP for 2016, 2017, 2018, 2019 and 2020;
Annual Reports on the State of Citizens' Health and Implementation of the National Health Strategy 2020 for 2017, 2018, 2019, 2020

*"Defined Daily Dose" (DDD) is an average daily maintenance dose of a medicinal product that is administered to adults for the main indication of the medicinal product. [2]

Medicinal products, paid for with funds from the budget of the Ministry of Health, are purchased in accordance with the Law on Public Procurement, and the actual implementation of the purchase and sale contract is carried out on the basis of quantities requested by the medical facilities.

The National Council on Prices and Reimbursement of Medicinal Products provides the necessary activities to maintain the reimbursement status of medicinal products in the Positive Drug List.

For the period 01.01.2016-31.12.2016, as a result of a reduction in the prices of 10 medicinal products belonging to 9 INNs, out of a total of 30 medicinal products agreed by the Ministry of Health, the reference value decreased within the limits of 0.1% to 22.2%. [3,9]

In 2017, out of the 29 INNs analyzed, in 11 INNs a decrease in the reference value was found within

the limits of 0.2% to 53.42%, which led to a decrease in the value paid by the Ministry of Health by a total of BGN 751,559. The lowering of the reference value is the result of: reducing the price of medicinal products in 8 INNs and inclusion of the first generic medicinal product in 3 INNs.

The inclusion of generic medicinal products in the INN – Darunavir; Tenofovir disoproxil and Emtricitabine, Tenofovir disoproxil resulted in a reduction of the reference value for DDD by 29.26%, 53.11% and 53.42%, respectively. As a result, the value paid by the Ministry of Health decreased by BGN 715,021. The most significant is the reduction of the value paid by the Ministry of Health for INN Emtricitabine, Tenofovir disoproxil, namely by BGN 671,402. [4,10]

In 2018, as a result of the inclusion of medicinal products and price changes in 13 INNs out of a total of 27 INNs, the reference value for DDD decreased, and in 6 INNs this was due to a decrease in the price of medicinal products belonging to the respective INN, while in 7 INNs is due to the inclusion of a first generic medicinal product or a new medicinal product during the reporting period. The reduction of the reference value is within the limits of 0.2% to 58.02%.

The inclusion of generic medicinal products in the INN – Abacavir, lamivudine, Lopinavir, Ritonavir and Ritonavir leads to a reduction of the reference value for DDD by 50.34%, 41.61% and 58.02%, respectively. [5,11]

For 2019, as a result of the inclusion of medicinal products and price changes in 12 INNs out of a total of 29 INNs, the reference value for DDD has decreased, and in 10 INNs this is due to a decrease in the price of medicinal products belonging to the relevant INN, while in 2 INN is due to the inclusion of a first generic medicinal product or a new medicinal product during the reporting period. The reduction of the reference value is within the limits of 0.23% to 55.87%. [6,12]

After the analysis for 2020, it was found that for 12 INNs out of a total of 74 INNs included in Appendix 3 of the PDL, the DDD reference value has decreased as a result of:

- reduction of the price of a medicinal product, carrier of the reference value in 8 INNs;
- inclusion of the first generic medicinal product or a new medicinal product in 2 INNs;
- reduction of the reference value of monoproducts during the reporting period - 2 INNs.

The reduction of the reference value for DDD/therapeutic course is in the range of 0.07% to 9.92%.

The most significant is the impact of the inclusion of the first generic medicinal product, and under the influence of this factor, the reference value for DDD/therapeutic course decreased most significantly in:

- INN Oseltamivir – with 42.33%;
- INN Iodine Ioflupane (123I) – with 29.81%.

In 2020, an increase in the DDD reference value was observed at 16 INNs. The reasons for the increase in the reference value are:

- Exclusion of a medicinal product from the PDL - at 2 INNs;
- Increase in the price of a medicinal product - at 13 INNs;
- New grouping of medicinal products by therapeutic indication - at 1 INN.

The most significant is the increase in the reference value for DDD/therapeutic course as a result of the exclusion of a medicinal product carrying the reference value in the INN Ethambutol - by 96.34%. [7,13]

DISCUSSION

With a change in the Law on Medicinal Products in Human Medicine, in 2015 a new procedure was introduced to maintain the reimbursement status of medicinal products every three years from their inclusion in the Positive Drug List. The purpose of this procedure is to carry out a regular re-evaluation of the products included in the list according to the criteria according to which they are included for reimbursement. In maintaining the reimbursement status, the evaluation of medicinal products is carried out on the basis of evidence of efficacy, therapeutic effectiveness, safety and analysis of pharmacoeconomic indicators.

With the entry into force on December 1, 2015 of the amendments and supplements to the Ordinance on the conditions, rules and procedure for regulating and registering the prices of medicinal products (State Gazette, No. 92 of 27.11.2015), the requirement the International Non-proprietary Name (INN) to which the medicinal product/combination belongs (for combined medicinal products) to be paid by a public health insurance fund for the same diseases or indications in at least five out of seventeen countries, is replaced by the requirement The International Non-proprietary Name to which the medicinal product belongs/ the combination (for combined medicinal products) is included in the pharmacotherapeutic guide

and the medical consensus for the treatment of the relevant disease in the procedure for maintaining the reimbursement status. The introduced provision ensures that, while maintaining the reimbursement status of the medicinal products in the Positive Drug List, only such products will be paid with public funds that have an established place in the therapeutic algorithms and have not lost their therapeutic value for the past 3-year period. [3]

External reference pricing, price revision, internal referencing in one INN are measures successfully implemented by almost all countries in Europe, but they alone are not sufficient to contain costs. In Bulgaria, these measures lead to the saving of public resources, the main reason being the reduction of the reference value for DDD or entry of the first generic or biosimilar product into the INN. The reduction of the reference value varies widely, with some products reaching up to 50%.

The 2018 EU-OECD report explicitly states that in the drug market, minimizing losses and optimizing the benefit of medicines are key to an efficient and stable health system. Policies to achieve this aim are aimed at ensuring value for money in the selection, access, supply and pricing of medicines, leveraging the capacity of generic and biosimilar medicines, ensuring rational prescribing and use and last but not least ensuring therapeutic consent of the patients. [16]

CONCLUSION

Medicines are of fundamental importance in maintaining life, improving its quality and alleviating suffering. This determines the need to ensure equal access to medicinal products for citizens, according to their needs and regardless of their financial capabilities.

Pharmaceutical products are one of the main pillars of healthcare, not just an object of trade. Insufficient access to essential medicinal products and high prices of innovative medicinal products pose a serious threat to the sustainability of national health systems. [8]

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