PT19

ANALYSIS OF ACCESS TO MEDICINES FOR RARE DISEASES IN COUNTRIES OF THE BALKAN PENINSULA - A COMPARATIVE ANALYSIS

Haygarova I[1], Turcu-Stiolica A[3], Paliu IA[3], Subtirelu MS[3], Karalazou N[1], Ganov N[1], Pesheva M[1], Savova A[1], Petrova G[1], Manova M[1], Ivanova B[2], Kamusheva M[1]

[1]Faculty of Pharmacy, Medical University of Sofia, Bulgaria
[2]National Council on Prices and Reimbursement of Medicinal Products, Bulgaria
[3]Department of Pharmacology, University of Medicine and Pharmacy of Craiova, Romania

Introduction and aim

- The term "rare disease“ (RD) is relative, because taken together, all people who suffer from the same or different RDs represent a large part of the population.
- Accessibility is very often one of the most severe constraints faced by people with RDs. The availability of medicines and timely access to them are important for reducing the morbidity and mortality of RDs.
- We aimed to analyse and compare the access of patients with RDs to pharmacotherapy by monitoring the legislative procedures and access to orphan drugs (ODs) via reimbursement system in Bulgaria, Romania and Greece.

Materials and methods

- The legislation and reimbursement lists of the countries Bulgaria, Greece and Romania, as well as the list of approved medicines for the treatment of RDs in the EU by 2023 using the Portal for Rare Diseases and Orphan Drugs and the public register of medicinal products in human medicine are studied.
- The W.A.I.T. (Waiting to Access Innovative Therapies) indicator allows to measure the time for market access, i.e. the days that have elapsed since receiving the orphan drug to inclusion in the reimbursement lists of the respective country (Positive Drug List – PDL). The indicator was calculated using the following formula:
  days for access to therapy = date of inclusion in the PDL – date of marketing authorisation (MA)
- For orphan drugs with MA and with current orphan designation we calculated what is the average duration of orphan status according to the formula:
  days duration with orphan status = Orphan designation (OD) expiration date *– OD date*
- For these medicines, we also calculated how many days pass on average from their designation as an orphan medicine to their MA by EU. The formula was used:
  days between OD date and MA = MA date *– OD date*
- For the study, an indicator was also applied to illustrate patients' access to the availability index (AI). It is calculated by the formula:
  AI = number of drugs included in PDL : number of approved drugs in EU

Conclusion

Patients' access to drug therapy and therapeutic outcomes have improved significantly since the adoption and implementation of legislation regarding encouragements to pharmaceutical companies, as well as the organization of various events to present the problems faced by patients suffering from rare diseases. The processes of pricing and reimbursement of orphan drugs are also essential for patient access to treatment.

Results

Indicator	Bulgaria	Romania	Greece
Population	6,806,691	18,782,847	10,304,578
Patients with RD	408 401	1 000 000	590 000
Percentage ratio	6%	5,3%	5,7%

Table 1. Data on the number of patients with RDs in Bulgaria, Romania and Greece

Indicator	Legislation until 2012			Legislation until 2022		
	BG	GRE	ROM	BG	GRE	ROM
Number of legislative instruments	6	1	1	6		5
Availability of a list of RDs	no	no	yes	yes	yes	yes
National plan for RDs	yes	yes	yes	no	no	yes
Reimbursement level	100%	100%	100%	100%	100%	100%
National registers for RDs	11	2	4			
Expert centres for RDs	25	12	18			

Table 2.Comparison of RD-related indicators in the countries Bulgaria, Romania and Greece

- The prevalence of RDs in the three countries is similar – about 6% of the total population **(Table 1);**
- Only in Romania there is a new program / plan for RDs after 2013 with scope 2014 - 2020 **(Table 2);**
- By 2022, all three analysed countries maintain a list of RDs registered on the territory of the country **(Table 2);**
- All medicines for RDs are fully reimbursed (100%) in Bulgaria, Romania and Greece **(Table 2)**
- The number of national registers for RDs is highest in Bulgaria (11), followed by Romania (4) **(Table 2);**
- The number of expert centres for treatment of RDs is the largest in Bulgaria (25), double the number of Greece (12) **(Table 2).**

- The total number of medicines for RDs that acquire orphan status and are authorized as of December 2022 is 179 **(Figure 1);**
- Of the 179 drugs, the most are those with the code L: Antineoplastic and immunomodulating agents – 71; with code A: Alimentary tract and metabolism are 37, with code B: Blood and blood forming organs – 13, with code C: Cardiovascular system – 3, with code D: Dermatological – 3, with code H: Systemic hormonal preparations, excluding sex hormones and insulins – 8, with code J: Antiinfectives for systemic use: 13; with code M: Musculo-skeletal system – 7, with code N: Nervous system- 13, with code P: Antiparasitic products, insecticides and repellents – 1; with code R: Respiratory system- 2, code S: Sensory organs – 5 and code V: Various – 3. No drugs with the code G: Genito-urinary system and sex hormones are found. **(Figure 2).**

- In 2012, the lowest number of orphan drugs reimbursed was in Bulgaria [(compared to Greece (24 vs. 45 (p=0.0003)] and Romania [(24 vs. 36 (p=0.0389)], with no difference between Greece and Romania (p=0.73);
- In 2022, the number of orphan medicinal products reimbursed is highest in Greece (111 vs. 48 vs. 61, p<0.0001), with comparable numbers in Bulgaria and Romania (48 vs. 61);
- Compared to 2012, there is an increase in reimbursed orphans by 100%, 147% and 69% respectively in Bulgaria, Greece and Romania (**Table 3**).

- The average duration of orphan drug status is 5701 days;
- The average number of days between labelling as an orphan medicine and obtaining EU authorisation is 20-32 days;
- According to WAIT indicator, patients in Bulgaria wait an average of 485 days less than patients in Romania (1192 vs. 1639)

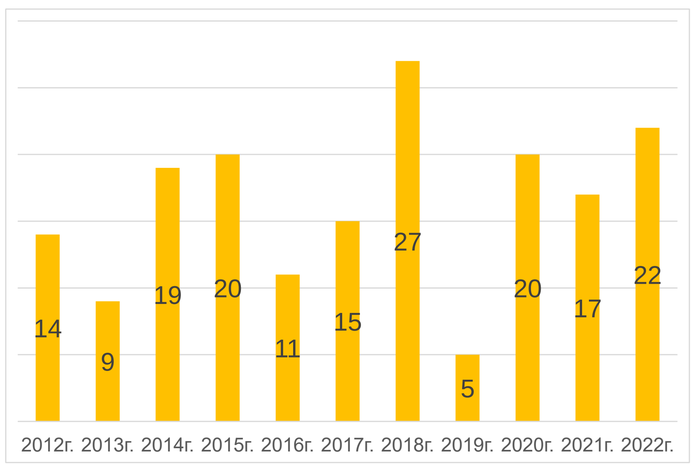

Figure 1. Number of orphan medicinal products authorised in the period 2012 - 2022

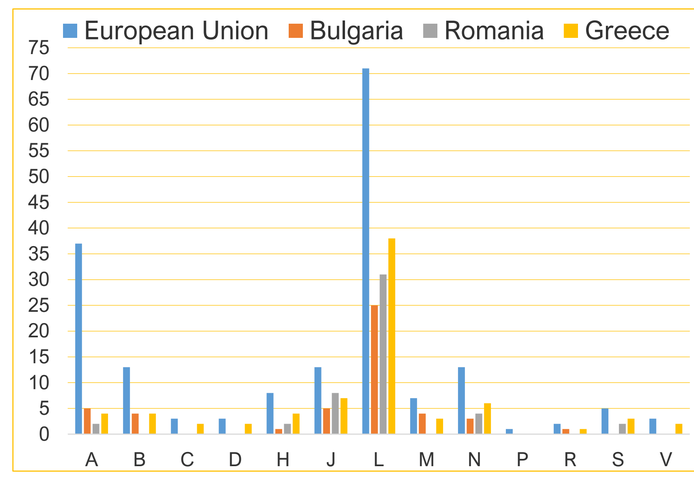

Figure 2. Number of reimbursed medicines by ATC code in the EU and in Bulgaria, Romania, Greece

	October 2012 approved orphan drugs	December 2022 approved orphan drugs	% increase of availability
EU	68	179	163.24
Bulgaria	24	48	100
Greece	45	111	146.66
Romania	36	61	69.44

Table 3. Comparison between the number of orphan drugs included in the reimbursement list of countries by 2012 and 2022

Discussion

- A comparison of RDs legislation in the Balkan Peninsula countries - Bulgaria, Romania and Greece - shows that in all three countries there is a good legislative basis that ensures adequate access for patients to medicines and medical care to treat their condition. In all three countries, there is an increased number of orphan medicines reimbursed compared to their number as of 2012.
- For the past 10 years, there has been improved access to patient therapy, the development of neonatal screening policies, an increased number of national disease registries and expert centres for the treatment of RDs. This is the result of hard work in the field of legislation, the objectives set out in the National Programs and the creation of organizations to meet the needs of patients with rare diseases.
- In 2012, the lowest number of ODs reimbursed was in Bulgaria [(compared to Greece (24 vs. 45 (p=0.0003)] and Romania [(24 vs. 36 (p=0.0389)], with no difference between Greece and Romania (p=0.73). In 2022, the number of orphan medicinal products reimbursed was highest in Greece (111 vs. 48 vs. 61, p<0.0001), as their number in Bulgaria and Romania is comparable (48 compared to 61).

Literature

For an overview of the literature sources used, please scan the barcode:

To contact a lead author: 105565@students.mu-sofia.bg
To contact a present author: mkamusheva@pharmfac.mu-sofia.bg