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**Original Article** 

# Comparative Analysis of Awareness of Medical Professionals in Three Balkan Countries (Bulgaria, Croatia, and Slovenia) of Continuing Education of Medical Professionals in the Area of Pharmaceutical Policy in the Respective Countries

### Branimir Brankov, Albena Zlatareva

Department of Pharmacology, Toxicology and Pharmacotherapy, Faculty of Pharmacy, Medical University of Varna, Varna, Bulgaria

**Corresponding author:** Albena Zlatareva, Department of Pharmacology, Toxicology and Pharmacotherapy, Faculty of Pharmacy, Medical University of Varna, 55 Professor Marin Drinov St., 9002 Varna, Bulgaria; E-mail: Azlatareva@gmail.com; Tel.: +359 885 006 255

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### Abstract

**Aim:** The objectives of our study were to establish the extent to which medical professionals are willing to upgrade their skills, to find out whether they have to resort often in their daily work to the support of colleagues in matters related to pharmaceutical policy, and to find out if they attend any forms of continuing education and whether such forms are available at their workplaces. The study also aimed to establish what web-based forms of continuous education the graduated medical professionals in Bulgaria, Croatia, and Slovenia know and consider to be up-to-date and adequate to their needs for specialised training programmes which ensure that their knowledge will be adequate to the constantly evolving environment in the area of pharmaceutical policy and pharmaceutical regulation.

**Materials and methods:** A survey was carried out among a representative sample drawn from three Balkan countries: Bulgaria, Croatia, and Slovenia. The survey was based on voluntary participation and relied on the 'snowballing' technique in order to recruit respondents and disseminate questionnaires.

**Results:** The results from the study demonstrate that the respondents are willing to, and are aware that they should, join forms of continuing education in the area of pharmaceutical policy since some of them encounter certain challenges related to the level of their knowledge in this domain, and that the deployment of specialised online programmes and other activities (such as workshops, conferences, etc.) for professional qualification of employees will certainly contribute to the enhancement of their qualification and to the improvement of the health services provided to citizens.

**Conclusions:** To keep in pace with modern trends in the area of postgraduate education, the medical universities which are most trusted by the respondents from the three countries included in survey as well as the career development services providers which offer postgraduate training courses should focus on the development and implementation of innovative forms of web-based postgraduate/ upskilling education in the area of pharmaceutical policy to ensure that more potential learners can join and update their understanding of this dynamic and rapidly evolving area of scientific knowledge.

### Keywords

medical professionals, pharmaceutical policy, postgraduate education

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## INTRODUCTION

As a key element of lifelong learning, continuing education becomes increasingly important in the modern globalized world as access to information is extremely simplified and constantly upgraded digital methods of education and upskilling strengthen their role in the training of university students.<sup>7-10</sup> The capabilities and the objectives of the system for education of medical graduates have been dramatically changing and expanding following the creation of digital platforms of the latest generation which provide, in real time, highly up-to-date and comprehensive medical information in every area of medical science.

Defining clear standards and learning sources which can be efficiently used in daily medical practice is among the priorities and challenges for all institutions in charge of regulating this dynamic area as well as for the medical professionals themselves.

The motivation to engage in upskilling (continuing) education should be cultivated and fostered as early as the would-be medical professionals sit at the university desks. This requires in-depth research into the factors which drive the lifelong learning process.<sup>12-23</sup> A number of medical universities in Bulgaria and worldwide work on the development of digital education platforms for graduated medical professionals in order to improve their career prospects and qualification.

Many Bulgarian and international scientists in the domain of medical education carry out research in this area, such as polls among graduated physicians, dental doctors and/or healthcare professionals<sup>1,2</sup> in order to identify the obstacles and challenges which learners face in the context of continuing education, the drivers which keep them engaged in the learning process, the medical sectors which require additional upskilling and the opportunities for the implementation of various lifelong learning projects.

The results from numerous studies on the issues of postgraduate and continuing education of medical professionals have demonstrated that graduated medics are perfectly aware of the multiple benefits of continuing education, and of the need to keep their knowledge and skills updated on a lifelong basis if they wish to pursue a successful professional career. The forms of education are constantly evolving, which helps address part of the problems which physicians, dental doctors, pharmacists and healthcare professionals used to encounter in the past, e.g. impossibility to be absent from work for prolonged periods, lack of time for self-learning in the context of traditional (face-to-face) training courses, and many others.

The concept of continuing education is defined as individual (customized) upskilling and improvement of the individual's professional competences following the completion of basic training in a given area. This kind of education continues throughout the individual's lifetime and is crucial for his/her professional development and for the acquisition of knowledge and skills required for successful professional and personal fulfilment.<sup>12-23</sup> The specificities of continuing training in modern times relate to the dynamically evolving learning environment and to the increasing role of technology, in particular of digital methods, in the learning and self-learning process. As university graduates enter the labour market, they need to be flexible, creative and adaptive to the dynamic professional requirements which await them in their daily practice. As soon as the young professionals leave the university campus, they face a reality of never-ending scientific and technological innovation and change in their areas of work. In today's globalized world, characterized by nearly instantaneous dissemination of enormous streams of information, dealing with the daily challenges is hugely dependent on the appropriate perception and understanding of the lifelong learning concept. Articles like "Continuing education - myth or real need" (D. Pavlov and I. Petkova)<sup>2</sup>, "Consulting role of pharmacists and their continuing education" (Stoimenova et al.)<sup>1</sup> stress that continuing education will, beyond doubt, keep developing and encompassing increasingly larger cohorts of professionals in diverse areas, and its impact and consequences will be increasingly palpable.<sup>1-3</sup> Eggelmeyer S<sup>4</sup> argues that in the 21<sup>st</sup> century everyone has to be a lifelong learner. Continuing education is a recognized need, and both the individual and society as a whole are stakeholders in it. According to a number of researchers on this topic, the speed at which the world is changing today requires the modern individuals to keep improving on a continuous basis in order to be in pace with the developments in their respective areas.4-6

M. Laal defines continuous education as continuous building of skills and knowledge through the experience which the individuals gain throughout their lifetime.<sup>4,5</sup> Many other researchers [e.g., J. Bryce et al. (2000) and N. Longworth & W. K. Davies (1996) and others<sup>27-29</sup> define lifelong learning as a continuous scaffolding process which encourages and enables the individual to acquire the required knowledge, values, skills and understandings, and apply these confidently and creatively across various roles, circumstances and settings.<sup>6</sup>

A number of studies<sup> $\overline{2}7-29$ </sup> carried out in Bulgaria and abroad aim to answer the question about the exact factors which encourage the future professionals (and medical professional in particular) to engage in continuous learning. We will also try to answer this and other equally important questions like the following: 1. To what extent are the medical professionals aspiring to upgrade their knowledge familiar with the European practices and standards for continuous learning, and with the access to digital forms of continuous education? 2. To what extent are the available online forms of training adequate to their requirements? 3. What is the level of the medical professionals' trust in the available digital platforms for self-learning and self-improvement?

Furthermore, we will try to identify the need for medical professionals in Bulgaria and in the Balkan region to upgrade their education particularly in the domain of pharmaceutical policy – a dynamically evolving branch of medical science. And to find out how modern education uses various forms of e-learning to respond to the graduated medical professionals' requirements for up-to-date and tailor-made training programmes to ensure that their knowledge will be adequate to the continuously and rapidly developing environment in the area of pharmaceutical policy and pharmaceutical regulation, e.g., by providing impact assessments of the legislation and of the national and international standards applied, consultation mechanisms, etc.

# AIM

The objectives of our study were to establish the extent to which medical professionals are willing to upgrade their skills, to find out whether they have to resort often in their daily work to the support of colleagues in matters related to pharmaceutical policy, and whether they attend any forms of continuing education and whether such forms are available at their workplaces. The study also aimed to establish what web-based forms of continuous education are known to the graduated medical professionals from Bulgaria, Croatia and Slovenia, forms which they consider to be up-to-date and adequate to their needs for specialised training programmes which ensure that their knowledge will be adequate to the constantly evolving environment in the area of pharmaceutical policy and pharmaceutical regulation.

# MATERIALS AND METHODS

A survey was carried out in a representative sample drawn from three Balkan countries – Bulgaria, Croatia and Slovenia. The survey was based on voluntary participation and relied on the 'snowballing' technique in order to recruit respondents and disseminate the questionnaire. **Fig. 1** shows the percentage of the respondents from each participating country.

The sample consisted of 21 participants altogether spread across a variety of professions and work environments/settings (Fig. 2).

The prevailing parts of respondents (42.9%) rate their knowledge in the area of pharmaceutical policy as *good* (Fig. 3). It is worth noting that the respondents assessing their knowledge to be *very good* are mostly Croatians (14.3%) rather than Slovenians (4.8%) or Bulgarians (0%) (Table 1). Bulgarians and Slovenians tend to rate their knowledge as *good* (19%), while 19% of the Croatians are *not sure*. A crosscheck using the chi-squared test reveals that these differences among the respondents are statistically significant ( $\chi^2$ =12.57, *p*=0.05).

When asked how often they faced situations which involve pharmaceutical policy matters, the larger group of respondents (28.6%) said that they had to deal at least once with such matters (28.6%). As regards the difficulties in dai-

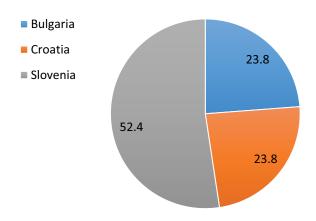


Figure 1. Distribution of respondents by country.

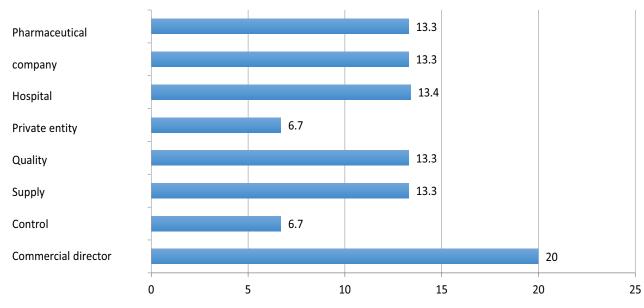


Figure 2. Distribution of respondents by workplace.

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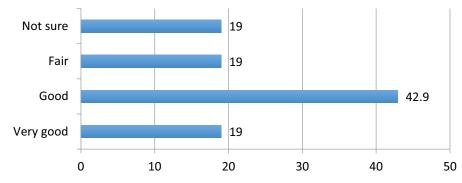


Figure 3. Rating of up-to-dateness of knowledge in the area of pharmaceutical policy.

Table 1. Up-to-datenes	s of knowledge ratings
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$\chi^2 = 12.57, p = 0.05$			Country		
$\chi = 12.57, p = 0.05$		Bulgaria	Slovenia	Croatia	—— Total
Very good	Count	0	1	3	4
	%	0.0%	4.8%	14.3%	19.0%
Good	Count	4	4	1	9
	%	19.0%	19.0%	4.8%	42.9%
Fair	Count	1	0	3	4
rair	%	4.8%	0.0%	14.3%	19.0%
NT-4	Count	0	0	4	4
Not sure	%	0.0%	0.0%	19.0%	19.0%
Total	Count	5	5	11	21
	%	23.8%	23.8%	52.4%	100.0%

ly practice which stem from pharmaceutical policy issues, it turned out that Bulgarians (14.3%) faced more difficulties than Slovenians (9.5%) or Croatians (4.8%); however, these differences were not statistically significant (**Table 2**).

The data in the table demonstrate that the respondents update their knowledge by participating in workshops with specialists or by attending presentations by subject-matter experts (28.6%), self-learning (28.6%), or by combinations of the three answers (76.4%) (**Fig. 4**). The chi-squared test revealed significant differences between the respondents ( $\chi^2$ =26.72, *p*=0.008). Thus, while Bulgarians rely on training at workshops and on the expertise of guest speakers,

Croatians opt for self-learning. Slovenians update their knowledge by various means as most of them (23.8%) rely on a combination of the three listed options (**Table 3**).

Overall, the respondents indicate that the human resources (HR) policy at the places they work requires the employees to be familiar with the latest trends (47.6%), and relies on external expert speakers for strengthening the employees' qualification (4.8%) (**Table 4**).

The results also revealed a statistically significant difference among the countries as regards the postgraduate education offered at the institutions for which the respondents work ( $\chi^2$ =18.07, *p*=0.021). While Bulgarians and Slo-

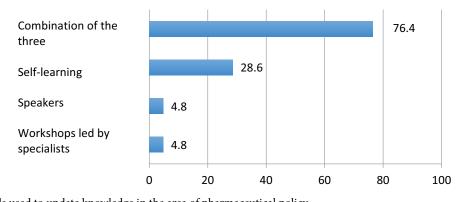


Figure 4. Methods used to update knowledge in the area of pharmaceutical policy.

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-2 17.22 t 0.69			Country			
$\chi^2 = 17.32, p = 0.68$		Bulgaria	Slovenia	Croatia	—— Total	
At least on as non day	Count	3	2	1	6	
At least once per day	%	14.3%	9.5%	4.8%	28.6%	
2 times per week or less often	Count	0	0	1	1	
3 times per week or less often	%	0.0%	0.0%	4.8%	4.8%	
1-2 times per month or less	Count	1	0	4	5	
often	%	4.8%	0.0%	19.0%	23.8%	
Once in 6 months	Count	1	3	0	4	
Once in 6 months	%	4.8%	14.3%	0.0%	19.0%	
Less than once in a year	Count	0	0	4	4	
Less than once in a year	%	0.0%	0.0%	19.0%	19.0%	
Not sure	Count	0	0	1	1	
Not sure	%	0.0%	0.0%	4.8%	4.8%	
Total	Count	5	5	11	21	
10(a)	%	23.8%	23.8%	52.4%	100.0%	

#### Table 2. Frequency of the situations which involve pharmaceutical policy issues

Table 3. Methods used to update knowledge in the area of pharmaceutical policy

-2 2(72 + 0.000)			Country			
$\chi^2 = 26.72, p = 0.008)$		Bulgaria	Slovenia	Croatia	—— Total	
Vorkshops with in-house	Count	0	0	1	1	
pecialists	%	0.0%	0.0%	4.8%	4.8%	
he institution invites expert	Count	1	0	0	1	
peakers at least once per year	%	4.8%	0.0%	0.0%	4.8%	
0.161	Count	0	0	6	6	
elf-learning	%	0.0%	0.0%	28.6%	28.6%	
Other	Count	0	0	2	2	
Juner	%	0.0%	0.0%	9.5%	9.5%	
Vorkshops and expert speak-	Count	4	1	1	6	
rs	%	19.0%	4.8%	4.8%	28.6%	
Workshops and solf learning	Count	0	1	0	1	
Workshops and self-learning	%	0.0%	4.8%	0.0%	4.8%	
Norkshops, expert speakers	Count	0	3	1	4	
nd self-learning	%	0.0%	14.3%	4.8%	19.0%	
<b>5 1</b>	Count	5	5	11	21	
Total	%	23.8%	23.8%	52.4%	100.0%	

#### Table 4. HR policy

How would you describe your institution's HR policy in the area of upgrading the employees' knowledge and qualification in the pharmaceutical policy domain?	Count	%
Civil servants are required to be familiar with the latest trends in the area, upskilling courses are available	10	47.6
External expert speakers are invited and on-the-job courses are organized	1	4.8
Other	6	28.6
Combination of these	4	19.0
Total	21	100.0

venians attend postgraduate courses at least once per year (19%), the majority of their Croatian colleagues respond either that such courses are not available (14.3%) or that they are not aware of such courses (23.8%) (**Table 5**).

The respondents' answers about face-to-face trainings on pharmaceutical policy issues are similar (**Fig. 5**).

A strong majority of respondents (63.2%) believes that there are regulated requirements to the candidates for continuing postgraduate education (**Fig. 6**) whereby the candidates are selected on the basis of their competence, education or specialty (15%). Another group of respondents (20%) consider that experience and competences guide the selection of candidates for continuing education in the area of pharmaceutical policy. Interestingly, Croatian respondents believe that selection is not necessary and eve-

Table 5. Frequency of postgraduate courses

ryone can enrol/apply (20%) or that the selection criteria are other (than those suggested in the questionnaire), while Bulgarian (15%) and Slovenian (20%) respondents consider that the selection should be guided by a combination of experience, education and competencies.

The main types of professionals working at the respondents' institutions are doctors, pharmacists, economists, experts in public education and other. The average distribution (in per cent) by country is shown in **Table 6**.

Disconcerting are the results reflecting the respondents' awareness of the forms (if any) of distant learning available in their country, and of the forms which are recognized by the higher education laws. The large percentage of negative replies indicates that information and awareness of trainings is lacking (**Tables 7, 8**).

( 2 10.05 ( 0.001)			<b>T</b> ( 1		
$(\chi^2 = 18.07, p = 0.021)$		Bulgaria	Slovenia	Croatia	—— Total
Once in 6 months	Count	0	1	2	3
	%	0.0%	4.8%	9.5%	14.3%
Once in a year	Count	4	4	0	8
	%	19.0%	19.0%	0.0%	38.1%
	Count	1	0	1	2
Once in 2 years	%	4.8%	0.0%	4.8%	9.5%
N;1,1,1,-	Count	0	0	3	3
Not available	%	0.0%	0.0%	14.3%	14.3%
Demetheren	Count	0	0	5	5
Do not know	%	0.0%	0.0%	23.8%	23.8%
Total	Count	5	5	11	21
	%	23.8%	23.8%	52.4%	100.0%

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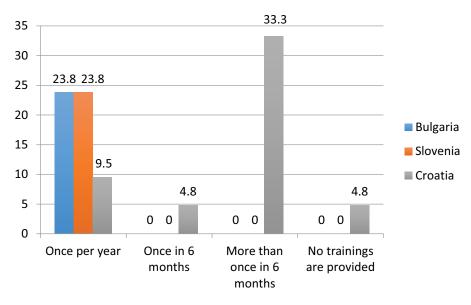


Figure 5. Frequency of trainings on pharmaceutical policy issues.

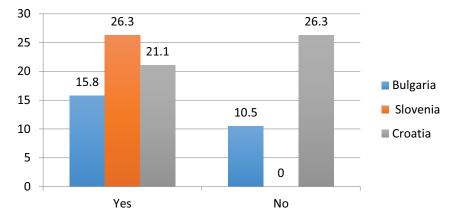


Figure 6. Selection of candidates for continuing education.

Table 6. Types of professionals employed

	Bulgaria	Croatia	Slovenia
Doctors	3.9%±1.8	10%±1	55%±15
Pharmacists	26%±12	20%±10	5%±4
Economists	17%±4.2	20±10	10%±5
Others	39%±4	60±10	53%±20

**Table 7.** Awareness of web-based training in the area of pharmaceutical policy offered in the respective countries

$\chi^2 = 2.77$ ,			Country			
<i>p</i> =0.49		Bulgaria	Slovenia	Croatia	Total	
Vaa	Count	3	4	4	11	
Yes	%	14.3%	19.0%	19.0%	52.4%	
N.	Count	2	1	7	10	
No	%	9.5%	4.8%	33.3%	47.6%	
Total	Count	5	5	11	21	
	%	23.8%	23.8%	52.4%	100.0%	

**Table 8.** Awareness of the forms of distant web-based training in the pharmaceutical policy area which are recognised by the higher education laws

χ <sup>2</sup> =2.91,				- Total	
p=0.33		Bulgaria	Slovenia	Croatia	Total
N	Count	4	3	4	11
No	%	19.0%	14.3%	19.0%	52.4%
Do not	Count	1	2	7	10
know	%	4.8%	9.5%	33.3%	47.6%
T- 4-1	Count	5	5	11	21
Total	%	23.8%	23.8%	52.4%	100.0%

Nearly 52% of the respondents in the three countries are aware of the various forms of distant web-based training in the pharmaceutical policy area available in their country; however, the same percentage of respondents (**Table 8**) do not know which forms of distant web-based training in the pharmaceutical policy area are recognised by the higher education laws. In fact, 71% of the respondents do not know any concrete web platforms which offer continuing and upskilling education courses. Mediately and Doktrina were among the few named platforms.

The respondents indicate that there are multiple organisations which provide and organise postgraduate upskilling education. While in Bulgaria and Slovenia these organisations are mostly universities, government organisations and private providers, in Croatia these are mainly government organisations. However, a notably large number of respondents are not interested in this matter (**Table 9**).

Quite logically, the institutions with the highest representativeness in pharmaceutical policy education are universities, private providers of upskilling education and non-government organisations (Table 10).

### DISCUSSION

Our study has demonstrated that the area of education and postgraduate qualification needs to be updated with a focus on new, digital forms of education by means of development, updating and adaptation of bespoke programmes for the education of medical practitioners to ensure that they keep pace with the dynamically evolving environment in the area of pharmaceutical policy and pharmaceutical regulation, e.g. impact assessments of the legislation and of the national and international standards applied, consultation mechanisms and other, on the basis of a proper training needs analysis. The study on the existing and on the required new specialised programmes for training the medical professionals in the area of management and implementation of national and international strategies and policies in the pharmaceutical domain, and for the application of laws, strategies, programmes and policies at national and international level, demonstrated that medical professionals in Bulgaria and in the Balkan region have the motivation and aspiration to upgrade their education in this area. There are relatively well aware of the upskilling opportunities in the area of medical education, and are willing to engage in various forms of postgraduate improvement.

Although conditions for lifelong learning do exist in the three Balkan countries covered by the study, this trend should be extended to the domain of pharmaceutical policy and regulation, especially for those working in the area of

**Table 9.** Institutions per country which most often provide and organise postgraduate upskilling education in the area of pharmaceutical policy

2 10			Country		TE ( 1
χ <sup>2</sup> =42, <i>p</i> =0.001	-	Bulgaria	Slovenia	Croatia	Total
T	Count	1	0	0	1
Universities	%	4.8%	0.0%	0.0%	4.8%
Commente and institutions	Count	0	0	2	2
Government organisations	%	0.0%	0.0%	9.5%	9.5%
NT	Count	0	0	2	2
Non-government organisations	%	0.0%	0.0%	9.5%	9.5%
Provide providers of upskilling	Count	0	3	0	3
education	%	0.0%	14.3%	0.0%	14.3%
Not interested	Count	0	0	4	4
	%	0.0%	0.0%	19.0%	19.0%
Universities and government	Count	0	0	3	3
organisations	%	0.0%	0.0%	14.3%	14.3%
Non-government organisations	Count	0	2	0	2
and private providers	%	0.0%	9.5%	0.0%	9.5%
Universities, non-government	Count	1	0	0	1
and government organisations	%	4.8%	0.0%	0.0%	4.8%
Universities, private providers	Count	3	0	0	3
and government organisations	%	14.3%	0.0%	0.0%	14.3%
T-4-1	Count	5	5	11	21
Total	%	23.8%	23.8%	52.4%	100.0%

**Table 10.** Institutions with the highest representativeness in each country which most often provide and organise postgraduate upskilling education in the area of pharmaceutical policy

$x^{2}$ 11 5 0 001			Country		Total
$\chi^2 = 41, p = 0.001$	_	Bulgaria	Slovenia	Croatia	Total
Universities	Count	0	0	3	3
Universities	%	4.8%	9.5%	14.3%	28.6%
Non-government organisations	Count	0	0	1	1
	%	0.0%	0.0%	4.8%	4.8%
Provide providers of upskilling	Count	0	3	0	3
education	%	0.0%	14.3%	0.0%	14.3%
	Count	0	0	7	7
Do not know	%	0.0%	0.0%	33.3%	33.3%
Universities and non-government	Count	4	0	0	4
organisations	%	19.0%	0.0%	0.0%	19.0%
TT ( )	Count	5	5	11	21
Total	%	23.8%	23.8%	52.4%	100.0%

medical services management and health policy. In order to keep in line with the European standards, access to upskilling education should be guaranteed for everyone who wishes to engage in such education.

As regards lifelong guidance, the Monitoring of EU education, training and employment policy underscores that one of the key roles of the European Lifelong Guidance Network (ELGN) is to ensure that lifelong guidance is fully mainstreamed in the relevant EU policy documents and processes.<sup>11-26</sup> The purpose of this briefing is to provide basic information of the EU's policies for career management skills by placing the topic in a wider context and keeping all ELGN members informed of the EU policies to which lifelong guidance can make a significant contribution, as well as provide context for a synthesized report. The initial part of the report explains how and why the theme of career management skills is prioritized in the implementation of lifelong guidance strategies. The second part of the report is dedicated to the future development of this theme in the context of a Crisis Response Plan, the renovation of the Lisbon strategy and the EDUCATION AND TRAINING 2020 framework.

Career management skills became a relevant theme already in the early years of the 21st century. Thus, in the Conclusions of the Lisbon European Council of 2000, although the concept of guidance was not specifically mentioned, reference was made to a 'European framework [which] should define the new basic skills to be provided through lifelong learning: entrepreneurship and social skills'. The focus is placed on the development of flexible guidance and awareness systems which are designed and adapted to the local circumstances from the perspective of lifelong learning. Personal development through recognizing one's own potential is defined as an overarching objective of education and training systems, as well as of societal and economic development. Personal fulfilment is also enshrined in the Lifelong Learning Communication of the European Commission (November 2001) entitled 'Making a European Area of Lifelong Learning a Reality'. The Communication highlights the importance of guidance systems which are flexible and adaptable to the 'changing needs of the individual learner - bearing in mind the value of guidance for personal fulfilment, as well as the needs of the labour market and the wider community.<sup>11-26</sup>

Career management skills have become a priority in the framework of the implementation of lifelong learning strategies. The principle of individual empowerment through guidance was added to the lifelong learning concept when the concept was at its early stages. This approach emerged in the Joint Interim Report (2004) of the Council and the Commission on the implementation of the Lisbon strategy: Education and Training, where guidance is defined as one of the four key actions for creating an open, engaging and accessible learning environment which supports learning across all ages and settings, enables citizens manage their own learning and performance and, first and foremost, facilitates the access to and the promotion of diverse opportunities for learning and career development. The Resolution on Strengthening Policies, Systems and Practices in the field of Guidance throughout life in Europe (2004) reaffirms the priority 'importance of refocusing the guidance services provided on the development of citizens' lifelong learning and management skills as a key part of education and training programmes'. The focus is placed on career management skills and on a competence-based approach. The lifelong learning process requires the individual to acquire certain competences. The European framework on key competences provides an important contribution to the integration in the EU education and training policies of the competence-based teaching and learning approach and of its new paradigm of learning outcomes.<sup>11-26</sup>

# CONCLUSIONS

The deployment of specialised online programmes and other activities (such as workshops, conferences, etc.) for the professional qualification of employees will certainly contribute to the enhancement of their qualification and to the improvement of the health services provided to citizens.

Accordingly, and to keep in pace with the modern trends in the area of postgraduate education, the medical universities which are most trusted by the respondents from the three countries included in survey as well as the career development services providers which offer postgraduate training courses should focus on the development and implementation of innovative forms of web-based postgraduate/upskilling education in the area of pharmaceutical policy to ensure that more potential learners can join and update their understanding of this dynamic and rapidly evolving area of scientific knowledge.

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# Сравнительный анализ осведомлённости медицинских специалистов в трёх балканских странах (Болгария, Хорватия и Словения) о непрерывном образовании медицинских специалистов в области фармацевтической политики в соответствующих странах

### Бранимир Бранков, Албена Златарева

Кафедра фармакологии, токсикологии и фармакотерапии, Фармацевтический факультет, Медицинский университет – Варна, Варна, Болгария

Адрес для корреспонденции: Албена Златарева, Кафедра фармакологии, токсикологии и фармакотерапии, Фармацевтический факультет, Медицинский университет – Варна, ул. "Проф. Марин Дринов" № 55, 9002 Варна, Болгария; E-mail: Azlatareva@gmail.com; Тел.: +359 885 006 255

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#### Резюме

**Цель:** Цели нашего исследования заключались в том, чтобы определить, в какой степени медицинские работники готовы обновлять свои навыки, понять, должны ли они в своей повседневной работе обращаться за поддержкой к коллегам по вопросам фармацевтической политики, и выяснить, принимают ли они участие в каких-либо формах непрерывного образования и доступны ли такие формы при их работе. Исследование также было направлено на установление того, какие веб-формы непрерывного образования выпускники в Болгарии, Хорватии и Словении считают современными и адекватными их потребностям в специализированных программах обучения, чтобы гарантировать, что их знания соответствуют постоянно меняющейся среде в области фармацевтической политики и фармацевтического регулирования.

**Материалы и методы:** Опрос был проведён на основании репрезентативной выборки трёх балканских стран: Болгарии, Хорватии и Словении. Анкета была основана на добровольном участии и полагалась на «эффект снежного кома» для набора участников и распространения результатов опроса.

**Результаты:** Результаты опроса показывают, что респонденты хотят и осознают необходимость присоединения к формам непрерывного образования в области фармацевтической политики, поскольку некоторые из них сталкиваются с определёнными проблемами, связанными с уровнем их знаний в этой области. что наличие специализированных онлайн-программ и других мероприятий (таких как семинары, конференции и т. д.) для повышения профессиональной квалификации специалистов, безусловно, будет способствовать повышению их квалификации и улучшению медицинских услуг, предоставляемых гражданам.

Заключение: Чтобы идти в ногу с текущими тенденциями в послевузовском образовании, медицинские университеты, которые наиболее известны среди респондентов из трёх опрошенных стран, а также поставщики услуг по развитию карьеры, которые предлагают обучение в аспирантуре, должны сосредоточиться на разработке и внедрении инновационных технологий Интернет-форм последипломного образования в области фармацевтической политики, чтобы гарантировать, что большее количество потенциальных учащихся смогут присоединиться и повысить свою компетенцию этой динамичной и быстро развивающейся области научных знаний.

#### Ключевые слова

медицинские специалисты, фармацевтическая политика, послевузовское образование