

## ORIGINAL RESEARCH

# Patients' attitude about generics – Bulgarian perspective

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## ABSTRACT

**OBJECTIVE:** The aim of the present study is to investigate (1) what is the patients' attitude towards and (2) preferences to use generic medicines in Bulgaria and (3) which are the main factors influencing their opinion.

**METHODS:** Using pseudo-randomization we select a sample of 225 participants, men and women from general population, patients in community pharmacies. For our survey we used a standardized self-questionnaire of ten points. The influence of sex, age, education, medical history, knowledge of generic drugs and experience with generic substitution and medicines was examined through Chi-square tests.

**RESULTS:** The results show that 74% of the participants seemed not to be informed on generic drugs and 26% received valuable and relevant information from their general practitioner or pharmacist. 94% believed that generic medicines are inferior to brand medicines on quality, safety and efficacy.

**CONCLUSIONS:** The main reason for almost all the participants (94%) to prefer original medicines, over generics is the insufficient information, they have. The core factors forming patients' opinion and expectations for generic drugs are medical professionals' recommendation and previous experience. The main advantages of the generics according to the participants in the study are the lower price and better accessibility. The results raise the issue of the awareness and level knowledge about generic medicines and the rational drug use in the general population.

**KEYWORDS:** generic medicines, patients' attitude, patients' point of view, Bulgaria

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Received:  
14.07.2011

Revision:  
27.11.2011

Accepted:  
28.11.2011

## INTRODUCTION

In an era of ageing population and rising healthcare costs, generic medicines allow patients to access safe, effective and high quality medicines at 20 to 80% of the price of branded originator medicines (1). Competition from generic medicines also incites originator companies to develop innovative medicines and reduce prices after patent expiry, thus generating additional savings for patients, healthcare budgets and insurance funds.

The issue of patients' attitude and experience towards generic drugs use is crucial in the frame of reducing the cost of medicines and therapy. A few studies show that patients do not have enough knowledge, but still have their opinion on generic drugs (2-5).

Generic medicines save patients' and insurance funds significant costs. The main reason for their lower price is the different business model of the generic companies - low investments in R&D, lower sales and marketing expenses, lower margins and benefiting from an already established market by the originator company.

Generic medicines play a key role in healthcare provision in the new EU Member States. They are crucial to making medicines accessible to patients, who cannot afford high co-payments for essential treatment. This is even more important considering that:

- Average GDP per capita for 2009, in the new Member States is more than 2 times lower

than in the old member countries (GDP of Bulgaria is 9,362 EUR vs. 23,600 EUR average in EU 27) (6).

- Real spending per capita on healthcare in the new Member States is €400 on average compared to over €1,600 in the EU (7).
- Several new Member States are already experiencing healthcare budget deficits due to rising pharmaceutical costs.
- Many patients do not buy their prescriptions, because they cannot afford the high out-of-pocket co-payments (7).

Generics represent nearly half of the volume of medicines dispensed to European citizens, but correspond to only 18% of the value of the total pharmaceutical market (7). However, volume share changes at country level.

Generic market for 2010 in Bulgaria is estimated to be over €460 million, which is only 10% more than the originator market. Meanwhile 5 times more generic medicines (in volume) were sold for the same period (8).

European citizens are more familiar with generic medicines in the self-medication where payment is made directly out-of-pocket. However it is chronic and terminal diseases, that account for most of the healthcare costs paid indirectly, through insurance funds and taxes contributions. This is also the area where generic medicines play the more significant role. The medicinal product must comply with the maximum degree of medical and financial interests of the patient (7).

The decision of prescribing a medicine is defined by the physician's perception of the illness, which is influenced by its seriousness and the interpretation of the symptoms. Previous studies show that the more serious illness is perceived less likely is the patient to agree with prescription of generic medicine (9).

Our study investigates patients' attitude and understanding of the generic medicinal products in Bulgaria. We focused on the main factors that influence their perception in relation to efficacy, safety and confidence in the therapy.

## MATERIALS AND METHODS

All the participants were interviewed in ten community pharmacies in five big cities in Bulgaria – Sofia, Burgas, Varna, Plevn, Plovdiv, during the period of May/July 2010. In order

to participate in the study, each patient should respond to some inclusion criteria – literacy, availability of personal prescription from general practitioner, previous experience to visited community pharmacy. A self-questionnaire with ten questions was distributed among the patients. The questionnaire included socio-demographic data, measure of understanding the difference between brand and generic medicines and patients' preferences for treatment.

All the source population (n=458) were Bulgarian, men and women aged over 18 years old. A sample of 225 (49%) participants or every second (pseudo-randomization) was made. After validation in the analysis were included 216 (96%).

The questionnaire took place in two phases: May/June 2010 and June/July 2010 for twenty workdays. Each community pharmacy from the preliminary chosen ones was visited twice between 9 am – 2 pm and the questionnaire was distributed. The filled in and given back questionnaires were validated and analysed.

## ANALYSIS

SPSS (Statistical Package for Social Sciences v.17) was used to investigate factors influencing patients' attitude towards generic medicines. The independent values were age, gender, education, previous experience with generic drugs, whether they have been informed by their general practitioners and pharmacists about generic substitution.

## RESULTS

29.6% of the respondents were men and 70.4% were women. Women are the main patients in the community pharmacies and they should be the target group of the generic industry. Half of the respondents (50%) had a university degree. These results are explained with the inclusion criteria "literacy" and the fact that the questionnaire was distributed only in major cities. Even with a possible selection bias, these patients are educated enough to acquire knowledge of generic medicines through educational campaigns and trust the pharmacist when he/she recommends them a generic medicine.

The majority of the respondents were aged over 46 years old. 25.5% were chronically ill. Most of the patients were diagnosed with hypertension (52.7%), alone or in combination with diabetes, heart failure or ischemic heart disease, diabetes (5.5%), asthma (12.7 %), etc. (Table 1).

**TABLE 1.** Patients distribution according to chronic diseases prevalence

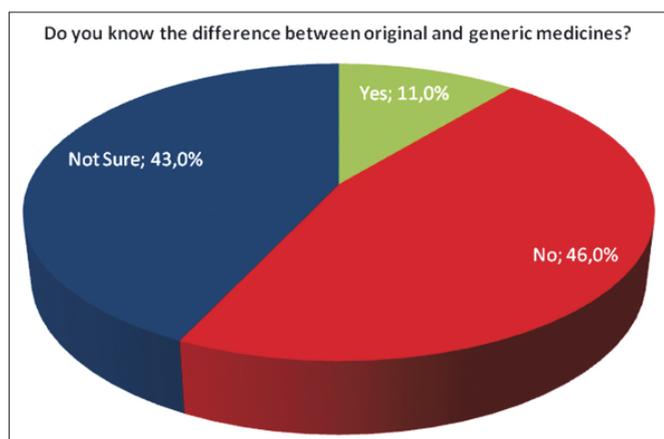
	n	Type of chronic disease		Share of chronically ill patients (%)	Cumulative percent
		(%)			
Hypertension	29	13,4%		52,7%	52.7
Hypertension/Diabetes	1	0,5%		1,8%	54.5
Hypertension, Hearth insufficiency, Hearth ischemia	1	0,5%		1,8%	56.4
Diabetes	3	1,4%		5,5%	61.8
Hearth insufficiency	3	1,4%		5,5%	67.3
Hearth ischemia	2	0,9%		3,6%	70.9
Asthma	7	3,2%		12,7%	83.6
Other	9	4,2%		16,7%	100
<b>Total</b>	<b>55</b>	<b>25,5%</b>		<b>100,0%</b>	<b>n/a</b>
Not chronically ill patients	161		74,5%		

**TABLE 2A.** Influence of the factor "generic substitution"

				Do you know what the difference between original and generic medicines is? vs. Has your physician ever proposed to you to prescribe you a generic medicine?			
				Has your physician ever proposed to you to prescribe you a generic medicine?			
				yes	rather yes	rather no	no
Do you know what the difference between original and generic medicines is?	yes	Count		3	3	11	7
		% within	Has your physician ever proposed to you to prescribe you a generic medicine?	21,4%	11,1%	14,7%	7,0%
	I'd rather do	Count		3	9	12	8
				21,4%	33,3%	16,0%	8,0%
	I'd rather don't	Count		4	9	29	19
				28,6%	33,3%	38,7%	19,0%
	no	Count		4	6	23	66
				28,6%	22,2%	30,7%	66,0%
Total		Count		14	27	75	100
				100,0%	100,0%	100,0%	100,0%

**TABLE 2B.** Influence of the factor "generic substitution"

				Do you know what the difference between original and generic medicines is? vs. Has your pharmacist ever proposed to you to substitute a prescribed original medicine with its generic equivalent?			
				Has your pharmacist ever proposed to you to substitute a prescribed original medicine with its generic equivalent?			
				yes	rather yes	rather no	no
Do you know what the difference between original and generic medicines is?	yes	Count		10	3	2	9
		% within	Has your pharmacist ever proposed to you to substitute a prescribed original medicine with its generic equivalent?	33,3%	10,0%	4,7%	8,0%
	I'd rather do	Count		5	8	6	13
				16,7%	26,7%	14,0%	11,5%
	I'd rather don't	Count		9	12	21	19
				30,0%	40,0%	48,8%	16,8%
	no	Count		6	7	14	72
				20,0%	23,3%	32,6%	63,7%
Total		Count		30	30	43	113
				100,0%	100,0%	100,0%	100,0%



**FIGURE 1.** Responders' opinion on the difference between original and generic medicines (total number of participants – 216)

**Information and knowledge about generic medicines**

About 3/4 of the respondents with chronic disease, replied that they do not have enough information about generic medicines and the difference between original (branded) and generic drugs (fig.1). Those who feel most informed are aged over 35 year, but are not necessary chronically ill. Only 1/3 of the patients with chronic diseases know the difference between original and generic medicines. They are either not aware of the different alternatives for their treatment or they haven't had the right of informed choice.

**Factors influencing patients' attitude and expectation towards generic medicines**

Physicians are the main factor influencing the patients in Bulgaria. Under the local regulations generic substitution is not allowed. Pharmacists are not authorized to replace prescribed medicinal product to its generic alternative. The alternative is for physician to prescribe the medicine under international non-proprietary name (INN) and then the pharmacist is choosing between the generic and the branded drugs. In the real practice this option is

**TABLE 3.** Influence of the factor "chronic disease".**Chronic disease vs. If you could, what medicine would you choose?**

		If you could, what medicine would you choose?		
			original	generic
Chronic disease	no	Count	151	9
		% within Chronic disease	94,4%	5,6%
	yes	Count	52	4
			92,9%	7,1%
Total		Count	203	13
			94,0%	6,0%

rarely used by the medical doctors and this makes them the most influential side in the triangle Doctor-Pharmacist-Patient (Tables 2a, 2b). Both relations are significant ( $p < 0.001$ ).

In table 3 we present summary data and preferences in the choice of medication by the respondents. We believe that insufficient information on generic medicinal products is the main reason nearly all patients (94%) prefer the original to generic products. This rate remains among the chronically ill, who are better informed and generally more inclined to substitution. The relation between the choice and presence or absence of chronically disease is not significant ( $p > 0.05$ ).

When respondents were asked about the most often prescribed drugs to them – 79.6% responded that these were the original medicines. Only 6.5% definitively stated that their physician had suggested replacing the therapy with generic one.

One of the main objectives of this study was to ascertain the attitudes among patients to generic drugs. The results show that 26.4% of the respondents believe that the generics have more or less advantages over the original medicines. This is roughly equal to the percentage of respondents who consider themselves familiar with the difference between innovative and generic medicines.

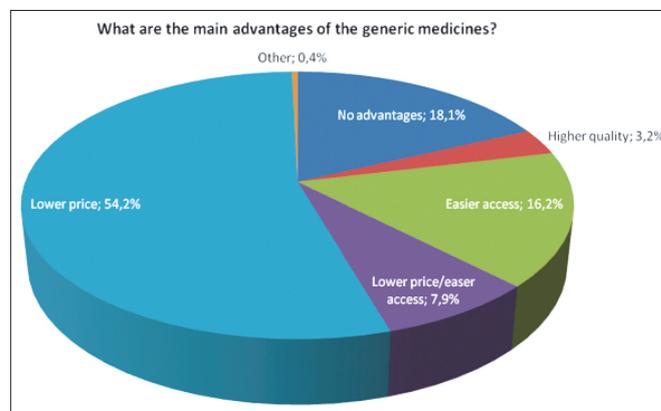
### Main advantages of generic medicines

Among the main benefits of generic medicines, the respondents placed the lower price (54.2%) and the fact that they are available and more easily affordable in pharmacies (16.2%) (Figure 2). Almost one fifth of the participants believe that generics do not have any advantages in terms of price, quality or availability compared to branded medicines. This coincides with previous studies showing that between 20-30% of consumers believe that generics are less safe and effective, as well as inferior or different from the original product (3).

Price is the leading factor for the people aged over 55 years and for the chronically ill patients, while availability in pharmacies is of utmost importance for younger people between 18 and 25 years old. These relations remained unproved ( $p > 0.05$ ).

### DISCUSSION

The present study included a sample from the general population in Bulgaria used to identify patients' opinion towards generic medicines. The overall results show that people generally believe that generic drugs are cheaper, compared to brand medicines. Participants with higher education turn out to be more

**FIGURE 2.** The main advantages of the generic medicines

familiar with generics. They have shown interest and have received information either from their physician/pharmacist or as a result from their own studies or personal experience.

The results also indicate that chronically ill patients are rarely aware of generic alternatives for their treatment. This is the target group of patients who are most favoured by the market entry of large number of generic medicines since they generally have a lower price than the original medicines.

The core factor determining patients' attitude towards generics is the information they receive from healthcare professionals, more specifically the medical doctor. According to previous studies generic substitution is practiced in many countries, but generally met with skepticism from medical professionals (10, 11). The analysis of the results shows that participants who are most familiar with generic medicines and consider them as an equal alternative for treatment are those, who have been offered a generic substitution by the prescribing doctor.

The negative attitude towards generic drugs in Bulgaria should be taken seriously and be explored by further studies in order to avoid non-compliance or treatment failure.

With the trend of aging population and increasing healthcare costs, it's inevitable that the use of generic drugs will increase in the forthcoming years. Legislative changes allowing the pharmacists a generic substitution, and nationwide educational campaign could significantly change the current attitude towards the generic medicines. The costs savings for the government, public funds and the individual patient will be an additional benefit.

### CONCLUSION

The main reason for almost all the participants (94%) to prefer original medicines, over generics is the lack of availability or insufficient information. The core factors forming patients' opinion and expectations for generic drugs are medical professionals' recommendation and previous experience. The main advantages of the generics according to the participants in the study are the lower price and better accessibility. The results raise the issue of the awareness and level knowledge about generic medicines and the rational drug use in the general population.

### Conflicts of interest

None

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