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## Determinants of the Choice of Community Pharmacy in The Czech Republic

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### Short Communication

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### ABSTRACT

To investigate the determinants of the choice of community pharmacy by Czech citizens and detect the development of behavioral changes in 2011 and 2013.

Sociological survey featuring a representative sample in terms of age, gender and region for the Czech population aged 15 and over (sample deviation from population breakdowns of the Czech Republic does not exceed 0.2%). After preliminary research (234 respondents in 2011 and 228 in 2013) the anonymous questionnaires were carried out in the Czech Republic (CR) during period of 21 November to 4 December 2011 and 18 November to 6 December 2013. All statistic analyses were performed using SASD 1.4.5 (Statistical Analysis of Social Data).

The data were obtained from a sample of 1797 individuals randomly selected using quotas. The response rate was 90% in 2011 and 86% in 2013. The choice of community pharmacy in CR is determined primarily by location (proximity). Much less importance placed on good service (personal experience with professional approach) or good price (lower prices and promotion on medicines). Slowly growing in importance of prices at the expense of other determinants was detected. All results are with statistical significance  $P < 0.001$ .

Good location of pharmacy is a key determinant for the largest part of citizens. It was distinguished increase of the number of citizens who choose their pharmacy primarily by price. Lower price of medicines is for their decision more and more important and it is preferred than quality service in pharmacy.

### INTRODUCTION

Strengthening the relationship between pharmacists and patients is not only long-term effort leading to successful pharmacotherapy, but also improve the competitiveness of individual providers of pharmaceutical care. The provider of pharmaceutical care can be freely changed in the Czech Republic (CR). There is no obligation of mandatory registration in a specific pharmacy<sup>[1]</sup>. In the Czech health care system expenses are paid mainly by public health insurance supplemented by low participation (out-of-pocket payments, copayment) paid by patients. Among OECD countries (The Organisation for Economic Co-operation and Development, 34 economically most developed countries in the world) CR devotes one of the largest shares of its national budget toward funding public health<sup>[2]</sup>. Reform measures implemented in the Czech health care system and its financing during last decade had an impact on patient behavior<sup>[3]</sup>. But the level of private expenditures is still only 16% and almost the lowest among OECD countries<sup>[4]</sup>.

With the growing number of community pharmacies in CR is also growing competition between them. There is non-

price competition (an effort to improve quality of services) still combined with price competition (lower prices and copayment for medicines) in CR. Competition seems to have a positive effect on some functional improvements of services provided by pharmacies [5].

There is complicated system in regulation by maximum prices and reimbursement of medicines in CR [6]. Absence of fixed, predictable and uniform copayments is in the CR among EU states still completely anomalous. The importance of price regulation in the health system and the pressure on non-price competition and suppression of price competition was observed in many cases. According to surveys from other countries deregulations and free market principles in community pharmacy might lead to unintended effects: Oligopolies of a few vertically integrated pharmacy chains might tend to dominate the market and align the product range to their suppliers; due to more competition and shortages in pharmacy staff, the workload for pharmacists might increase with a possible risk of a deterioration of counseling quality; and economic pressure for pharmacists might incentivize them to focus more on business goals than on public health objectives [7].

Our investigation of the determinants of the choice of community pharmacy by Czech citizens and detecting of the development of behavioral changes in 2011 and 2013 can provide information on the current status and determinants competition among community pharmacies in CR.

Sociological survey featuring a representative sample in terms of age, gender and region for the Czech population aged 15 and over (sample deviation from population breakdowns of the Czech Republic does not exceed 0.2%). After preliminary research (234 respondents in 2011 and 228 in 2013) the anonymous questionnaires were carried out in the Czech Republic (CR) during period of 21 November to 4 December 2011 and 18 November to 6 December 2013. All statistical analyses were performed using SASD 1.4.5 (Statistical Analysis of Social Data) with statistical significance  $P < 0.001$ .

Motivating factors in pharmacy selection was investigated in the research through a semi-open question: "What is the most important factor in your selection of pharmacy?" According to preliminary research the choices of answers were "good location", "good service", "good price", "no preference" and "another factor". "Good location" means the nearest pharmacy and its good accessibility, "good service" means professional approach of staff, good personal experience, possibility of discussing personal health issues and additional services providing in pharmacy. "Good price" hides cheaper prices, promotion on medicines, discounts advertising and various frequent buyer programs. Respondents were able choose only one answer, which was regarded as the most influential factor in their decision. For detailed results see **Table 1**.

**Table 1.** Priority determinants of the choice of community pharmacy for different groups of the Czech population (in percentage,  $P < 0.01$  for each).

Priority determinant	Men		Women		15–24 years		25–64 years		65 years andover		Lower education <sup>1</sup>		Higher education <sup>2</sup>		TOTAL	
	2011 N=877	2013 N=874	2011 N=920	2013 N=923	2011 N=259	2013 N=245	2011 N=1222	2013 N=1211	2011 N=316	2013 N=341	2011 N=768	2013 N=721	2011 N=1029	2013 N=1076	2011 N=1797	2013 N=1797
Good Location	45,8	34,0	37,0	30,9	45,6	32,2	41,4	32,8	37,3	31,1	44,0	27,3	39,3	35,7	41,3	32,4
Good service	25,2	20,7	32,2	26,1	26,6	20,8	29,5	25,4	27,2	18,5	22,1	22,9	33,7	23,9	28,7	23,5
Good price	18,1	27,7	24,2	32,4	20,1	27,4	19,1	27,4	30,4	41,6	24,9	35,9	18,6	26,2	21,3	30,1
No preference	10,5	15,8	6,5	9,4	7,3	18,0	9,7	13,0	4,8	7,0	8,7	12,6	8,2	12,5	8,4	12,5
Another factor	0,4	1,8	0,1	1,2	0,4	1,6	0,3	1,4	0,3	1,8	0,3	1,3	0,2	1,7	0,3	1,5

Note: <sup>1</sup>People with a lower schooling attainment (primary, vocational and technical school graduates).

<sup>2</sup>People with a higher schooling level (secondary school and university graduates).

Where many significant differences between different population groups are distinguished. For changes in differences between the dominant factors and graphical expression see **Chart 1**.

Location and availability of pharmacy is a key determinant for the largest part of citizens, although this strength decreased in the second survey by almost 22%. As the main reason of this decreasing was distinguished increase of the number of citizens who choose their pharmacy primarily by price and they prefer a lower price over other factors. The growth during the period was even more than 41% and the lower price was for their decision more and more important. Priority factor "personal experience", like satisfaction with the pharmacy services carried out by staff of pharmacies, decreased during the period by 18%, which certainly cannot be regarded as a positive trend in strengthening relationships between pharmacists and patients. The implementation of policy measures should be accompanied by long-term policy monitoring and evaluation and similar studies should continue also in the following periods.

**Chart 1.** Priority determinants of the choice of community pharmacy in 2011 (inner circle) and 2013 (outer circle).

## METHODS

Sociological survey featuring a representative sample in terms of age, gender and region for the Czech population aged 15 and over (sample deviation from population breakdowns of the Czech Republic does not exceed 0.2%). After preliminary research (234 respondents in 2011 and 228 in 2013) the anonymous questionnaires were carried out in the Czech Republic (CR) during period of 21 November to 4 December 2011 and 18 November to 6 December 2013. All statistical analyses were performed using SASD 1.4.5 (Statistical Analysis of Social Data).

## RESULTS

The data were obtained from a sample of 1797 individuals randomly selected using quotas. The response rate was 90% in 2011 and 86% in 2013. The choice of community pharmacy in CR is determined primarily by location (proximity). Much less importance placed on good service (personal experience with professional approach) or good price (lower prices and promotion on medicines). Slowly growing in importance of prices at the expense of other determinants was detected. All results are with statistical significance  $P < 0.001$ .

## CONCLUSION

Good location of pharmacy is a key determinant for the largest part of citizens. It was distinguished increase of the number of citizens who choose their pharmacy primarily by price. Lower price of medicines is for their decision more and more important and it is preferred than quality service in pharmacy.

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