

# PHARMACEUTICAL CARE IN COMMUNITY PHARMACY IN THE REPUBLIC OF MACEDONIA. A COMPARED STUDY WITH EU COUNTRIES

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## Abstract

In recent years in the Republic of Macedonia, the pharmaceutical legislation has undergone permanent modifications in terms of the unification with the European legislation. In essence, the establishment of certain new criteria and the amendment of the whole set of standards uniform in the EU, will undoubtedly help in increasing the quality of pharmaceutical services and will guarantee the patients' health. The Republic of Macedonia has a social healthcare system. Pharmacies are in private ownership but healthcare authorities regulate the prices of medications and the number of pharmacies across the whole territory. Many of these pharmacies have concluded regular collaboration contracts with the Health Insurance Fund of the Republic of Macedonia. The services provided by these pharmacies consist mainly in the distribution of prescribed medications and OTC preparations, nutrition products, medication usage recommendations, effects and anti-effects, etc. This paper aims at reviewing the existing legislation, the reforms carried out in time, the existing status of the pharmaceutical community in Macedonia, while comparing it with some of the countries of the EU. Special emphasis will be put on reviewing the possibilities for better inclusion of pharmacists in the healthcare system so that they can become participants in the healthcare provision teams as well as get included in the activities for the prevention of different diseases. In this respect, lots of research in international literature, including scientific articles, presentations, technical reports, and other studies has been carried out in order to present the experiences from the EU member states.

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**Keywords:** Legislation, pharmaceutical, pharmaceutical care, pharmaceutical services

## Introduction

Changes in the nation's health care system, especially the growth of managed care and integrated health systems, are stimulating adoption of primary care as a way of meeting basic health care needs and managing access to specially services. Integrated health systems are organized to deliver acute, intermediate, long-term, home, and ambulatory care. They are intended to seamlessly provide care across practice settings through appropriate use of individual health professionals and team (Am.J.Health-Syst Pharm. 1996).

Pharmacy has matured as a clinical profession and is presently well positioned to transform itself from product and ask oriented (dispensing) to a patient oriented profession (provision of care, advice and counseling) (Adepu R. et al, 2006). One of the key factors of the improvement of healthcare services are the pharmacists. Their role is crucial since the profession of a pharmacist in itself means having to deal with patients with different needs on

daily basis, who quite often require more qualitative healthcare services and treatment.

Pharmaceutical care is a practice philosophy for pharmacy. It is the way of pharmacists to coach the individual patients with their medication. The concept deals with the way a patient should receive and use medication and should receive education on the use of medicines. The concept also deals with responsibilities, medication surveillance, counseling and the evaluation of all the outcomes of care (Foppe van Mil JW et al.2004). In many developed countries of the EU such as Germany, Austria, Denmark, Portugal, and United Kingdom, community pharmacists are involved in many dimensions in healthcare. Pharmacists in these countries also participate in disease management. On the contrary, in the

Republic of Macedonia, even though the concept on the pharmaceutical care is one of the most important items within the framework of great changes that have been made in the pharmaceutical sector, the services provided by community pharmacists usually consist of medicine dispensing and limited medication advice.

## **Materials and Methods**

There has been a lot of research carried out based on international literature such as scientific articles, abstracts, presentations, technical reports and other studies that deal with the issue of inclusion of pharmacists in the healthcare systems. The guidelines of Good Pharmacy Practice (GPP) have also been used. At the center of attention there have been articles which deal with pharmaceutical services provided by the pharmaceutical community in some of the EU countries, which were selected as points of reference. The comparison was made based on the existing situation of the pharmaceutical community in Macedonia. Based on the analyzed data, recent changes within the framework of numerous reforms in the pharmaceutical sector in particular and the healthcare system in general, were selected. The data related to the number of pharmacies per capita and the services provided by pharmacies have been given in charts using MS Excel 2007. Comparative data from some EU countries have also been presented in graphs.

## **Results**

### **Historical reforms in the pharmaceutical sector in Macedonia**

Since 1991 the pharmaceutical sector in Macedonia has undergone drastic and permanent changes due to the fact that all healthcare institutions including pharmacies experienced a transition from the public to the private system. The pharmaceutical community increased permanently. With the establishment of private pharmacies, there was a need for change in the legislation. In the coming years, within the numerous reforms the establishment of a National Drug Information Centre in 1998 happened. In addition, a National Centre for Pharmacovigilance was established in 1991. In 1997, it was networked with the WHO Center Drug Adverse Effects as accompany member, while full membership was obtained in 2000 (Petrushevska-Tozi L. et al, 2012). The reforms at a broader level in the healthcare system would include the implementation of new norms of Good Pharmacy Practice (GPP) in 2009.

The GPP guidelines define four core activities of pharmacists: 1) public health function related to health promotion and disease prevention 2) supply of medicines and medical products of good quality as well as provision of relevant patient instructions and advice on medicine use 3) self-medication activities and related patient advice and 4) pharmacist contribution to rational prescribing and appropriate use of medicines (Official Gazette of RoM, No.44, 2009). This would create the possibility for improving quality of pharmaceutical services and the inclusion of pharmacists in many roles in terms of healthcare and it would also ensure them the deserved place in the overall community of healthcare providers and workers. The great enthusiasm that emerged within the pharmaceutical community was soon put out since other problems started to appear and they were most often

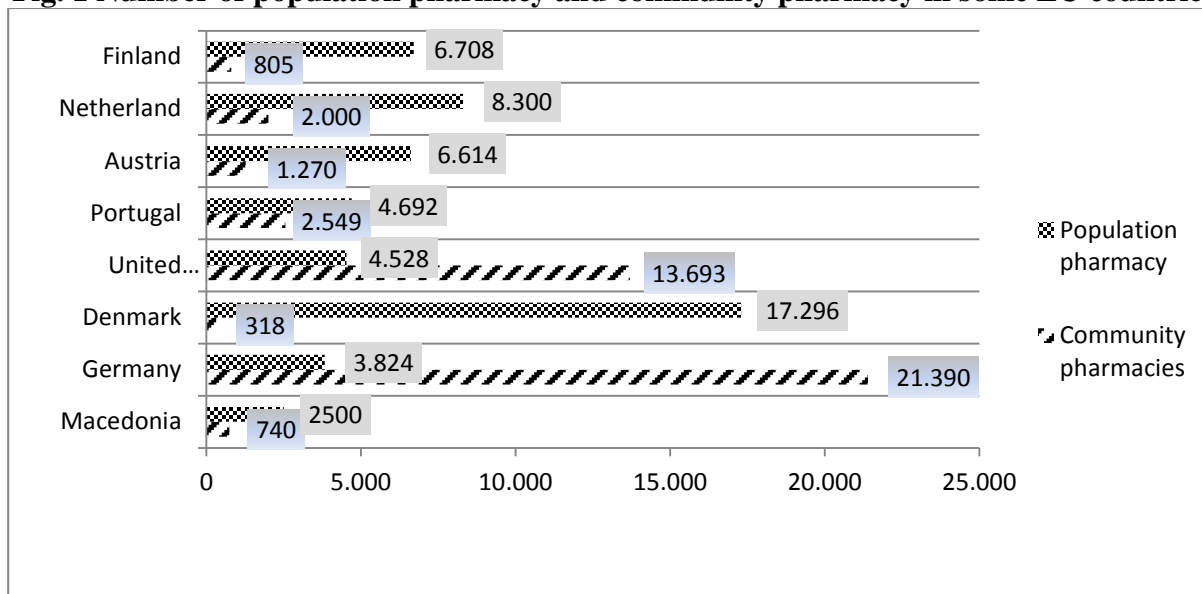
related to the economic aspect as well as the lack of coordination with the existing legislation, which does not support the concepts of pharmaceutical practice and care .

### The current status of the pharmaceutical community and future challenges

There are 740 pharmacies that are currently active in Macedonia, along with another 44 installed within the secondary and tertiary level healthcare institutions (Official Gazette of RoM, No. 81, 2012). In total, the proportion of pharmaceutical communities and the population is 1:2500. In the presented graphs below, we can see the great differences when compared to some EU countries such as Germany, Austria, Denmark, United Kingdom, Portugal, Finland, Netherlands, etc. This is because in these countries there is another mode of organization of the pharmaceutical community. In some countries pharmacies are large and they offer services for a great community and in some other countries there are more small pharmacies that provide services to a certain number of inhabitants. The Scandinavian type of pharmacy has relatively large pharmacies, serving 10.000-18.000 people. Southern Europe, France and Belgium have very small pharmacies that serve approximately 2000-2500 clients.

In the UK and Ireland are Anglo-Saxon type pharmacies which sell many non-medical items in addition to medicines and which serve approximately 3500 people. Lastly, there are pharmacies in Central and Eastern Europe (Germany, Switzerland, Austria), which focus on all kinds of healthcare amenities and serve 3000-5000 people (J.W.Foppe et al. 2006)

**Fig. 1 Number of population pharmacy and community pharmacy in some EU countries**



Source: Atkinson J, Rombaut B. The 2011 PHARMINE report on pharmacy and pharmacy education in the European Union. *Pharmacy Practice (Internet)* 2011 Oct-Dec;9(4):169-187.

What should be pointed out is the fact that these pharmacies have been distributed irrationally. A greater concentration of pharmacies can be noticed in main centers and towns, whereupon in some cases their number exceeds the maximal necessary amount. On the other hand, in some rural areas there may be cases where there are no pharmacies at all, which is a big hassle to the population residing in these areas. Since all pharmacies are private in terms of primary healthcare, there are no mechanisms to facilitate the establishment of new pharmacies in these areas, since the owners are led by their economic interests (Farmac. Informator, 2010).

**Tab 1. Network of community pharmacies per regions in Republic of Macedonia**

<b>Region location of community pharmacy</b>	<b>Actual number*</b>	<b>Maximum number**</b>	<b>Citizens (total)</b>
<b>Macedonia</b>	<b>740</b>	<b>617</b>	<b>1850190</b>
<b>Pelagonia</b>	<b>107</b>	<b>77</b>	<b>234137</b>
<b>Vardar</b>	<b>54</b>	<b>43</b>	<b>133106</b>
<b>North-East</b>	<b>57</b>	<b>58</b>	<b>175045</b>
<b>South-West</b>	<b>70</b>	<b>74</b>	<b>221855</b>
<b>Skopje</b>	<b>233</b>	<b>207</b>	<b>619718</b>
<b>South-East</b>	<b>76</b>	<b>59</b>	<b>172858</b>
<b>Polog</b>	<b>76</b>	<b>106</b>	<b>314804</b>
<b>East</b>	<b>67</b>	<b>67</b>	<b>200522</b>
Source: Regulation for Network of Health Institutions (Official Gazette of RM, No. 81/12)			

In general they are small pharmacies in which higher school graduate pharmacists work (at least one pharmacist per shift who as to be on site all the time) and a technician who have usually graduated from professional medical/pharmaceutical high schools (Official Gazette of RoM, No.11, 2012). Services offered by pharmacists in these pharmacies are still limited to medication delivery, information of patients about the effects of drugs, etc. This situation changes a lot in developed countries of the EU where the role of pharmacists is multidimensional and the services offered by the pharmaceutical community encompass a broader array.

Based on the experience from some of the developed countries, the role of pharmacists according to the Standards for Quality Pharmacy Services (GPP) is as follows: “Pharmacists should engage in preventive care activities that promote public health and prevent disease, i.e. in areas such as smoking cessation, infectious and sexually transmitted diseases; pharmacists should also provide point-of-care testing, where applicable, and other health screening activities for patients at higher risk of disease” (WHO Technical Report Series, 2011). There have been many attempts by the Macedonian Pharmacist Association for better inclusion of pharmacists in the healthcare sector but they have all resulted in failure. Such attempts have never been supported by the Ministry of Health and as such they remain a challenge for the future.

### **A review of pharmaceutical care in some European countries**

In different European countries, one can notice a difference between the modes of organization of the pharmaceutical community since in line with their regulations and legislation, as well as the healthcare system, these countries have guided and developed the pharmaceutical practice in different directions.

In the UK, National Health Service (NHS) pharmaceutical services are delivered under contract by privately owned community pharmacies. Community pharmacies in UK have a crucial role in primary care and public health; there are also several examples of community pharmacy involvement in chronic disease management. In the North-East Primary Care Trust Hospital, patient hospital discharge information concerning high-risk patients is faxed to community pharmacists. The pharmacist visits the person at home for medication review, liaises with the GP practice, produces a care plan and continues to monitor progress/control (Noyce PR, 2007).

In Germany, cognitive pharmaceutical services are being implemented and the role of pharmacists only supplying medicines is changing. In 2003 the way towards cognitive

pharmaceutical services started with family pharmacy contracts between community pharmacists representatives and the largest sickness fund that include remuneration of pharmacists when providing pharmaceutical care. These contracts were extended in 2004 and since then general practitioners have been integrated. Most of the community pharmacies in Germany are part of this initiative (Eickoff C. et al, 2006).

In Portugal, there are 2,549 pharmacies, a coverage ratio of 4,692 inhabitants per pharmacy. The community pharmacist in Portugal makes an active contribution to the adoption of healthy habits and the prevention of illness, making the pharmacy a place of health care that plays an increasingly active role in the rational use of medicines and in promoting the well-being of the population. Indeed, the pharmacist plays a most active role in promoting the rational use of medicines, in pharmaco-surveillance, in health education, in detecting certain disease, in fight against AIDS, and in providing information both to doctors and to patients

Given the degree of confidence and credibility which the pharmacists inspires among the population, and the ease of dialogue between pharmacist and patient, several education campaigns have been successfully promoted, aimed at health care and at the prevention and detection of disease (Ilvana .S, 2001).

Denmark has 322 pharmacies, corresponding to one pharmacy per 16,700 inhabitants. All pharmacies provide prescription and over-the-counter products, advice about medicine use, dose dispensing, generic substitutions, and administration of individual reimbursement registers. Except for very simple processes, compounding is centralized at three pharmacies. Many pharmacies offer measurement of blood glucose, blood pressure, and cholesterol, and 60% offer inhalation counseling, a reimbursed service (Hanne H. et al, 2007).

In the Netherlands, where pharmacies are relatively big and 95% of patients always visit the same pharmacy, medication surveillance (automated drug use review or DUR) developed as early as the 1980s, and pharmacists and general practitioners (GPs) in the region discuss pharmacotherapy almost monthly (de Smet PAGM, 1992). Pharmaceutical care standards were first established in 1996, and the scientific institute of the professional pharmacist organization (WINAP) chose pharmaceutical care as its focus for further professional development around 1997 (Boysen M, 2004). In general, the comprehensive pharmaceutical care model is followed, although a number of disease-oriented projects addressing asthma and diabetes have also been implemented (Blom LTG et al. 1999)

Finland had 799 community pharmacies as of 2005. Medication counseling has been mandated by law since 1983 and only pharmacists are permitted to provide therapeutic advice in pharmacies. Since the late 1990s, Finnish pharmacies have actively participated in national public health programs, initially in the areas of asthma and diabetes, and more recently in the treatment and prevention of heart disease (Bell JS et al. 2007).

## **Conclusion**

Numerous studies that have been carried out in recent years in almost all European countries speak about different forms of inclusion of pharmacists in the healthcare system. In many of these countries, the implementation of GPP norms and the inclusion of pharmacists with a multidimensional role is giving promising results both in the treatment and prevention of many illnesses. Pharmacists represent a very important part in the healthcare system since they are the ones to detect, prevent or correct the problems that their patients face. In Macedonia there is sufficient potential and workforce and readiness by pharmacists to undertake new roles in the healthcare system as a whole. The experiences from the countries included in this study should serve as a motivation for the Ministry of Health to start thinking about including pharmacists in the adopted health care programs. In addition, the correctness in relations between physicians and pharmacists remains as one of the challenges to be dealt

with in the future, since its final resolution would actually mean better healthcare services for the patients.

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