PHARMACEUTICAL CARE SERVICES AND QUALITY MANAGEMENT IN COMMUNITY PHARMACIES – AN INTERNATIONAL STUDY

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INTRODUCTION

Community pharmacies in Europe and also all over the world offer a wide range of professional and commercial services to their customers.
Since the philosophy of pharmaceutical care was internationally launched by Hepler and Strand in 1990, community pharmacists have been pushed by their professional organizations to take more responsibility for patient care (FIP 1997; FIP reference guide, 2009). The implementation and practice of pharmaceutical care services must be supported and improved by measuring and assessing pharmacy practice activities by utilizing the conceptual framework of continuous quality improvement (Rexy et al., 2006). A key lesson is that in many cases quality of pharmacy services can be improved by making changes in the health care system or pharmacy system without necessarily increasing resources. Improving the processes of pharmacy practice do not only create better outcomes but also reduces costs through eliminating waste, unnecessary work and repetition of work already done. Thus, quality improvement must address both the resources (structures) and activities carried out (processes) to ensure or improve the quality of pharmaceutical care (outcomes) (WHO/PHARM/PAR/2006.5).

The main objective of my study is to describe services provided by different community pharmacies around the world and also to define quality management systems they use as a tool to measure quality of services and work of community pharmacies in different FIP member countries. For this reason the CPS representative directly contacted owners of the selected pharmacies and asked them to contribute to the study.

The concept of quality in health services

Various organisations and researchers have defined in more abstract terms the meaning of quality of care. The World Health Organization (WHO) defines quality of care as: The extent to which the care provided, within a given economic framework, achieves the most favourable outcome when balancing risks and benefits (Heidemann, 1993). Donabedian (1980) stated that: The quality of care consists of the application of medical science and technology in a way that maximizes benefits without correspondingly increasing risks. The degree of quality is, therefore, the extent to which care provided is expected to achieve the most favourable balance

between risks and benefits. Roemer and Montoya-Aguilar (1988) wrote that quality of health care consists of the proper performance (according to standards) of interventions that are known to be safe and affordable to the society in question, and have the ability to produce an impact on mortality, morbidity, disability, and malnutrition (Kwast, 1998).

Also the concept of quality can be defined as meeting the set requirements at the lowest possible cost (Närhi, 2001). Health care services should be of good quality for achieving the desired outcomes. These principles were extended to the community pharmacy services via the philosophy of pharmaceutical care in the beginning of 1990s.

International initiatives to promote service development and quality management in community pharmacies

International Pharmaceutical Federation (FIP) is an organization with a worldwide focus and it has had a key role in implementing the philosophy of pharmaceutical care into community pharmacy practice (International Pharmaceutical Federation 1997 and 2009). FIP first adopted the guidelines for Good Pharmacy Practice (GPP) in 1993 (Good Pharmacy Practice, 2010). These guidelines were developed as a reference to be used by national pharmaceutical organizations, governments, and international pharmaceutical organizations to set up national standards of Good Pharmacy Practice. During the last years, FIP has been in the process of updating the GPP Guidelines. For that purpose, it produced a Reference guide on Good Pharmacy Practice in 2009 (International Pharmaceutical Federation 1997 and 2009). FIP has been closely cooperating with World Health Organization (WHO) in GPP standard development (International Pharmaceutical Federation, 1997).

In Europe, EuroPharm Forum has been the coordinator of actions in developing community pharmacy services to meet the public health goals set by WHO (EuroPharm Forum, 2010). EuroPharm Forum was established in 1993 and it is an umbrella organization for national pharmaceutical organizations in Europe. It was operating under WHO until 2007 when it became an independent international organization. EuroPharm Forum has closely cooperated with FIP.

EuroPharm Forum's actions are based on 5-6 guiding protocols for national programs to involve community pharmacists in promoting public health. The goal is to support community pharmacies to develop new professional services that are in line with the local health policy. Patient counseling, asthma, hypertension and diabetes management, and smoking cessation were the first program protocols developed in 1993. Since then new programs and implementation kits, as well as program updates have been established on the basis of the program implementation follow up data from different member countries. The last adopted programs are related to counterfeit medicines and metabolic syndrome (EuroPharm Forum, 2010).

From the beginning, EuroPharm Forum has promoted research on outcomes assessment of the established programs. Thus, it has had a crucial role in evolving sound methodology in outcomes assessment. The European researchers working in this area formed their own network in 1990s called Pharmaceutical Care Network of Europe (PCNE) (Pharmaceutical Care Network of Europe, 2010).

From the European perspective, Council of Europe is a government-level organization that has had an important role in public health policy making. Medicines is one of its focus areas in public health (European Derectorate for the Quality of Medicine and Healthcare, 2010). In 2003, Council of Europe established two expert groups on Patient and Medication Safety (Council of Europe, 2010). As a result, recommendations on promoting patient safety were approved by the ministries of member states in 2006 (Council of Europe Rec(2006)7, 2006). Medication safety was selected as a special focus area in the recommendations. The recommendations on safe medication practices with the explanatory memorandum were also published as a separate report "Creation of a better medication safety culture in Europe: building up a safety medication practices" (Council of Europe report (P-SP-PH/SAFE), 2006). As a continuum to this work Council of Europe established a new Expert Group with a mission on creating key indicators in pharmaceutical care practices and services (European Derectorate for the Quality of Medicine and Healthcare, 2010).

The aim and the objectives of the research

The aim of the current study is to describe the range of services provided by the community pharmacies and to analyse the quality management systems developed so far in these pharmacies. In order to achieve this aim, we need to address two subsets of questions. **The first subset** relates to the basic description of the pharmacies that were selected for the investigation by FIP. The steps that cover this first set of issues are as follows:

1. the types of the community pharmacies participating in the FIP survey will be described;
2. the aim of the pharmacy, the number of personnel, and its categories of clients will be explored;
3. the services provided by the pharmacies will be described;
4. the financial and management resources of the pharmacies, as compared to other pharmacies originating in the same country of concern, will be analysed.

The second subset will include questions related, in particular, to the assessment of the quality management systems existing in the community pharmacies selected for the analysis by FIP:

1. visions, missions and quality policies of the community pharmacies participating in the FIP survey will be outlined;
2. in-house guidelines and measurements concerning the processes in the pharmacies (e.g. services provided) will be discussed;
3. policies on personnel management and development will be covered;
4. the conditions created for the IT support will be summarised;
5. connections of the community pharmacies to other health care providers will be analysed;

Finally, it should be mentioned that the list of the above issues is not fixed. Any additional information that might be revealed on the basis of the analysis of the FIP data will be used to cover some other issues of our interest.

1 THE CONCEPT OF PHARMACEUTICAL CARE

From a long-term perspective, the pharmacists' role has shifted from compounding to dispensing medicines, and recently towards providing professional services, with this trend being driven by the concepts of pharmaceutical care and the clinical pharmacy (Van Mil and Schulz 2006).

1.1 Pharmaceutical care

Pharmaceutical care is the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life".
(Hepler and Strand, 1990)

The term pharmaceutical care was published as early as 1975 by Mikeal et al.(1975). That was criticised by Hepler and Strand (1990) when introducing their professional philosopy of pharmaceutical care. They pointed out that it is not enough to extend the professional role by providing sophisticated pharmaceutical services or divising new technical functions without assessing their value and relevance to the customer, health care and the society. Futhermore, the services should be based on the needs of individual customers. So pharmaceutical care emphasises not only the pacient-orientation and collaboration, but also an outcome-orientation (WHO/PSM/PAR/2006.5).

In the pharmaceutical care concept, pharmacists should engage in the systematic, comprehensive process whereby they are able to accomplish three primary functions: 1) identify actual and potential drug-related problems of patients, 2) resolve the problems, 3) prevent potential problems from becoming actual problems (Strand et al. 1992). The process consists of seven successive steps that are quite analogous with the steps in the quality assurance cycle (Strand et al. 1992). The steps deal with evaluation of patients' needs, identification of actual and potential drug-related problems, and working with patients and professionals to design, implement and monitor an appropriate treatment plan. Thus, the philosophy of pharmaceutical care has bought the idea of patient-oriented services and continuous quality improvement into the field of pharmacy (Ivey 1993, Hepler 1995). The service provider (e.g. pharmacists) should be able to recognise and identify the needs and expectations of their customers and other interest groups (Schondelmeyer 1987, Hepler and Strand 1990, Strand et al.1992).

Pharmaceutical care does not existin isolation from other health care services (Van Mil et al., 2004).

Since then, the same term has been used for numerous different reintegrated functions (Van Mil et al. 2004a, Van Mil and Schulz 2006). Consequently, by the 1990s the key community pharmacy organisations in Europe started to look at pharmaceutical care as the strategic future of the profession (Van Mil and Schulz 2006).

1.2 Community pharmacy role

The mission of pharmaceutical practice is to provide medication, healthcare products, professional services and to help people and society to make best use of medicines (FIP, 2009).

The profession has had a proactive role in building up new professional services to meet the needs of the consumers and medicine users.

While appropriate drug therapy is safer and more cost-effective than other treatment alternatives, there is no doubt that the personal and economic consequences of inappropriate drug therapy are enormous. It is important for society to be assured that spending on pharmaceuticals represents good value for money. In view of their extensive academic background and their traditional role in preparing and providing medicines and informing patients about their use, pharmacists are well positioned to assume responsibility for the management of drug therapy. (Developing pharmacy practice, WHO 2006).

The accountability of health professionals for their actions is another major issue in health care provision. In the traditional relationship between the doctor as prescriber and the pharmacist as dispenser, the prescriber was accountable for the results of pharmacotherapy.

That situation is changing in rapidly evolving health systems. The practice of pharmaceutical care assumes the pharmacist to be responsible for patients under their care, and society will not only accept that assumption but hold the profession to it (Developing pharmacy practice, WHO 2006).

Pharmaceutical care does not exist in isolation from other health care services (Van Mil et al. 2004a, Van Mil and Schulz 2006). It must beprovided in collaboration with patients, physicians, nurses and other health care providers.Pharmacists are

responsible directly to patients for the cost, quality and results of pharmaceutical care.

In 1998, a Statement of Professional Standards in Pharmaceutical Care was adopted by FIP. It provides guidance to pharmacists and national health care organizations as they begin to implement broad pharmaceutical services in their countries. FIP supports the concept of pharmaceutical care but recognizes the individual needs of different countries (FIP 2007a).

1.3 FIP defining the role of community pharmacists

The International Pharmacy Federation (FIP) is a worldwide federation of national pharmaceutical associations and it represents and serves pharmacy and pharmaceutical sciences around the world (FIP 2007a). FIP activities are designed to improve the long-term effectiveness of patient care.

In 2000 WHO launched the "seven star pharmacist" concept, which introduced seven future roles for pharmacists, and in 2000 FIP included these roles in its policy paper "Good Pharmacy Education Practice" (FIP 2000).

In 2006, WHO and FIP continued their joint project in order to further develop pharmacy practices, and they added one more role to the pharmacists (Wiedermayer et al. 2006). In the last version, pharmacists were described as 1) caregivers (provide caring services) 2) decision-makers (on the appropriate, efficient, safe and cost-effective use of resources) 3) communicators (linking prescribers and patients) 4) managers (managing resources) 5) life-long learners (keeping their knowledge and skills updated) 6) teachers (providing education and training to future generations) 7) leaders (able to make decisions, communicate and manage effectively in multidisciplinary caring situations) as well as 8) researchers (able to use evidence). In the performance of these roles, pharmacists should adhere to the FIP code of ethics (FIP 2004).

1.4 The concept of Good Pharmacy Practice - GPP

Defenition: Good Pharmacy Practice (GPP) is the practice of pharmacy that responds the needs of the people who use the pharmacist's services by providing

optimal , evidense based care. To support this practice it is essential that there be an established national framework of quality standarts and guidelines (FIP, 2009).

FIP is organization with a international focus worldwide. The International Pharmaceutical Federation first adopted the guidelines for Good Pharmaceutical Practice in 1993. These guidelines were developed as a reference to be used by national pharmaceutical organisations, governments, and international pharmaceutical organizations to set up nationally accepted standards of Good Pharmacy Practice. The basic idea of Good Pharmacy Practice (GPP) document are largerly the same with a general concept of pharmaceutical care. And good pharmacy practice also can be used like to implement the pharmaceutical care. When developing quality assurance systems for GPP, important differences between countries have to be recognized. All countries should be working towards establishing a long term vision for pharmacy practice. The first steps in such strategic planning usually involve determining the functions of pharmacists that are desired by patients, physitions, policy makers, insurers, payers, and the other health care practitioners and then to determine who should have accountability for this functions.

1.5 Historical development of of Good Pharmacy Practice guidelines

Following the adoption of WHO's revised drug strategy by the Thirty-nineth World Health Assambly in 1986, WHO organized two meetings on the role of pharmacists- in New Delhi in 1988 (WHO, Delhi rep., 1988) and in Tokyo in 1993 (WHO, Tokyo rep., 1993). Subsequently, WHO organized two more meetings on the role of the pharmacist – one in Vancouver in 1997 (WHO, Vancouver per., 1997) and in Hague in 1998 (WHO, Hague, 1998). The meeting added value of the pharmacist in self-care and self-medication (FIP reference guide, 2009).

In 1992, the International Pharmaceutical Federation (FIP) developed standarts for pharmacy services under the heading „Good pharmacy practice in community and hospital pharmacy settings".

In coolaboration with WHO, the first edition of a practical handbook „Developing Pharmacy Practice- A Focus on Patient Care" (Wiedenmayer et al., 2006) was launched in 2006.

With the overall aim to improve standarts and practice of the drug distribution and drug utilization , using the FIP/WHO Guidelines for Good Pharmacy Practice as a framework , FIP had also taken initiatives to explore the possibilities for providing technical assistance to its Member Organizations in Thailand, Uruguay, Vietnam, Moldova, Mongolia, Paraguay and Cambodia in developintg national standarts for GPP in the pilot study from 2005-2007(GPP annual report 2008; FIP reference guide, 2009). In 2008, the FIP working group on Good Pharmacy Practice organized an expert counsultation in Basel. The meeting report identified key issues that need to be considered in the revision of the guidelines (FIP Basel, 2008).

In 2009 International Pharmaceutical Federation produced Reference guide on Good Pharmacy Practice for supporting the revision of 1993 FIP/WHO Statement on Good Pharmacy Practice. The purpose of reference guidebook serves to define good pharmacy practice by contamporary standarts of practice and thinking; it also aimes to emphasize that GPP offers a system, whereby pharmacists can provide pharmaceutical care. Patients are at the focus of attention of pharmacists and patients can be treated better by optimizing their use of medicines through receiving pharmaceutical care. Finally document is also intended to encourage national policy makers to focus the attention on pharmacists when establishing guidelines (FIP reference guide, 2009)(See Table 1).

Table 1. Milestones in implementing Pharmaceutical Care and establishing GPP guidelines.

Year	**Event**
1990	Hepler and Strand article „Opportunities and responsibilities in pharmaceutical care".
1992	International Pharmaceutical Federation (FIP) developed standarts for pharmacy services under the heading „Good pharmacy practice in community and hospital pharmacy settings."
1993	FIP/WHO Statement on Good Pharmacy Practice. Standards are an important part in the measurement of quality of service and at the International Pharmaceutical Federation (FIP) Congress in Japan in 1993 the Tokyo Declaration on Good Pharmacy Practice (GPP) was adopted.

1993	EuroPharm Forum established, and first programmes were started.
1994	The Pharmaceutical Care Network Europe (PCNE) was established by a number of European pharmaceutical care researchers. It became an official association (under Dutch law) in 2004. (The aim of PCNE is to help to develop pharmacy along the lines of pharmaceutical care in the involved European countries).
1994	World Health assambly resolution on the role of the pharmacist in support of the WHO revised drug strategy
1998	The paper, entitled "GPP in Developing Countries – Guidelines for Implementation", was endorsed by the FIP CPS Executive Committee.
2003-2006	Council of Europe , Health committee on Medication Safety.
2006	FIP in coolaboration with WHO produced first edition of a practical handbook "Developing Pharmacy Practice-A Focus on Patients Care".
2009	GPP update

1.5.1 The requirements of Good Pharmacy Practice

1) Good pharmacy pharmacy practice requires that a pharmacist's first concern in all settings is the welfare of patient (FIP, 1997).

2) Good pharmacy practice requires that all prcesses in supplying medicines and assuring appropriate use take into consideration the patient's health, the public health and the environment (FIP, 1997).

3) Good pharmacy practice requires that the core pharmacy activity is the supply of medicines and other health care products of assured quality, appropriate information and advice for the patients, and monitoring the effects of use (FIP, 1997).

4) Good pharmacy practice requires that an integral part of the pharmacist's contribution is the promotion of rational, cost effective, economic prescribing and of appropriate use of medicines (FIP, 1997).

5) Good pharmacy practice requires that the objective of each element of pharmacy service is relevant to the patient, is clearly defined and is effectively communicated to all those involved (FIP, 1997).

6) Good pharmacy practice requires thatsuccesful drug therapy management involves the collaboration of a team of pharmacists, physitians, nurses, and other health care practitioners (Academy of Managed Care Pharmacy, 2002).

7) Good pharmacy practice requires that, as readily accesible health professionals, pharmacists provide primary health care including education and advice to promote good health and to reduce the incidence of illness (Pharmaceutical Society of Australia, 2006; FIP, 2009).

1.6 Initiatives taken to promote service development and quality management in community pharmacies

The trend is that initiatives taken to improve professional community services are mainly taken voluntarily within the profession and without incentives for providing the new services.

Based on the pharmaceutical care philosophy by Hepler and Strand (1990), the recognition of drug-related problems (DRP) in pharmacies is needed. For this purpose several DRP classification models has been developed (Westerlund 2002, van Mil 2005, PCNE 2006). A huge effort has been made to create computer-based programs to identify DRPs, and in many countries, DRP identification, resolution and documentation have been at the core of pharmaceutical care (Van Mil et al. 2004b). In Sweden the DRP classification system was incorporated into the Swedish community pharmacy software in 2001 (Westerlund 2002). During the first year, nearly 300,000 prescription and OTC related DRPs showed that adverse reactions were the most frequently documented type of drug-related problem (Westerlund and Björk 2006). In the Netherlands, the following DRPs are being monitored by all three competing pharmacy software products: daily dose, interactions, double medication, contraindications, allergies and adherence (Van Mil 2005). The pharmacists resolve the detected problems together with the patient and/or the physician.

EuroPharm Forum developed many international protocols and guidelines to help pharmacists' to provide high quality pharmaceutical care in community pharmacies

and also for development a new community pharmacy services. “Pharmacy based asthma service protocol and guidelines” were developed in 1998, “Pharmacists and action on tobacco” (1999), “Pharmacists against smoking - Research report” (2001), “Improved quality in diabetes care” (2001), “Questions to ask about your medicines (QaM): campaign proposal (1993) and Guidelines (2004), Pharmacy-based hypertension management model: protocol and guidelines” (2005), “Framework for a Guide on counterfeit medicines for pharmacists” (2009) and the last adopted document is “Metabolic Syndrome Pharmaceutical Care Programme” (2009) (EuroPham Forum, 2010). All this initiatives should help pharmacists’ to develop and improve services they provide.

Pharmacists are also urged to provide preventive care services to patients suffering from chronic disease (EuroPharm Forum 2008a). In Germany, an asthma programme was started to change the image of community pharmacists as being merely a dispenser of medicines to that of a highly qualified advisor. The asthma programme started initially as a controlled intervention trial, leading to an intervention study and later, in 2003, to nationwide implementation (Eickhoff and Schulz 2006). This project demonstrated that community-pharmacy base interventions significantly improved clinical parameters, asthma-specific quality of life, self-efficacy, self-management and the self-knowledge of the patient (Eickhoff and Schulz 2006).

Council of Europe also like many other organizations provides recommendations and initiatives in healthcare. Special part of it is about pharmaceutical care.

In 2006 Council of Europe produces a report “Creation of a better medication safety culture in Europe: building up a safety medication practices” with a specific focus on medication errors and their prevention in Europe. One of current priorities of the Committee comprises the development of provisions and practices in the field of quality assessment in pharmaceutical practice and care in Europe through quality indicators (EDQM, 2010).

2 PHARMACEUTICAL CARE SERVICES

2.1 The value of Pharmaceutical Care Services

Through its impact on individual patients' state of health, pharmaceutical care improves the quality and cost-effectiveness of health care systems. Improvements at the micro-level impinge on the overall situation at the macro-level, i.e., communities benefit when individuals within them enjoy better health. Ultimately the population at large will also benefit as system-wide improvements occur (WHO/PSM/PAR/2006.5).

Pharmacists' services and involvement in patient-centred care have been associated with improved health and economic outcomes, a reduction in medicine-related adverse events, improved quality of life, and reduced morbidity and mortality (Berenguer B et.al 2004), (Cipolle et.al 2004).

A recent review investigated the effectiveness of professional pharmacist services in terms of consumer outcomes, and where possible, the economic benefits. Its key findings illustrate the value of a range of services, including continuity-of-care after hospital discharge and education to consumers and to health practitioners. Overall, this review demonstrantes that there is considerable high quality evidence to support the value of professional pharmacy services in improving patient outcomes or medication use in the community setting (Wiedenmayer et al.2006).

Elsewhere, an Australian study on the economic impact of increased clinical intervention rates in community pharmacy found that adequately trained and remunerated pharmacists generated savings (on health care, medicines and pharmacy practice costs) six times greater than those of a control group with no access to the same education or remuneration. It was estimated that adequately trained and remunerated pharmacists would save the health care system 15 million Australian dollars (approx. US$100 million) a year (Benrimoj et.al.2000). Similar findings are reported from the USA (Shumock et.al.2003).

2.2 Projects of Community pharmacy services made by EuroPharm Forum in colaboration with WHO

During the last decades many projects and documents were made, in which pharmacists can be involved in important area of health education (See Table 2).

Table2. Characteristics and key points of each programme

Programme	**Characteristics**	**Services**
”Pharmacists and actions on tabacco”(EUR/ICP/ LVNG 020712, 1998).	This document is mainly addressed to national pharmaceutical associations so that they are able to begin own programmesin this area.	Services which should be provided by community pharmacies according toEuro PharmForum this programme: • Leaflets, • Patient verbal counselling by pharmacist, • Window displays, • Posters.
„Questions to ask about your medicine”(QaM)w as started in 1993 (EUR/05/5049481) .	The overall aim of this compaign was to improve the use of medicines. EuroPharm Forum proposed to launch a Europe-wide compaign to encourage individuals to ask their doctors and pharmacists some basic questions and volunteer personal information of concern when taking drugs.	• Patient counselling in community pharmacy, • Patient counselling in call-centers, • Patient counselling via internet.
„Pharmacy-Based Hypertantion Management Model” published in 2005.	The main gole was to improve hypertantion control at community level through a more active involvement of pharmacists in the prevention, detection and management of hypertention (EUR/04/5049481).	• Regular blood pressure measurement and other relevant health parameters, • Pacient counselling and information on treatment, • Reinforcement of therapeutic compliance • Identification of possible drug related problems and report to G.P. • Councelling on lifestyle modification • Pacient counselling and information on self-medication • Teaching self-measurement of blood pressure.
„Pharmacy- based asthma service. Protocol and guidelines”(EUR/I CP/QCPH060602,1 998).	Goal is provide community pharmacists with tools for dealing with asthma patients in the everyday	• Systematic drug information on asthma medicines, • Systematic counselling in correct use of inhalaters and inhaler devices, • Identification and assesment drug

	practice. The main focus is to provide a systematic and structured approach to pharmacy-based asthma services including documentation of the pharmacy services, their outcomes and implementation strategies.	related problems, • Ensuring the individual patient's understanding of the use and the effect of the medication, • The provision of pharmaceutical care for asthma patients by comprehensive therapeutic outcomes monitoring (TOM) programme, • Documentation of the service.
„PharmaDiaßprogramme" (2005)	The programme aims to improve the quality of diabetes care by:1)Preventing diabetes onset, 2)Ensuring early diagnosis, 3)Preventing or delaying complications.	• Counselling, • Weigth measuring service, • BMI index tabeles in community pharmacies, • Customer leaflets, • Registration forms.
„Guide on counterfeit medicines for pharmacists", 2009.	This document aims to provide Europharm Forum member organisations with a framework facilitating the publication of a national Guide on counterfeit medicines for pharmacists. This question became very actual in last decade, and this is a big broblem nowadays in all over the world (Guide on conterfiet medicines, 2009).	

2.3 The range of services provided by community farmacies in different countries

I tried to find available information about services provided by pharmacies in different countries in publications and articles by key words searching (community

pharmacy, pharmacy service, customer service) in medical journals and databases (Medline, PubMed, etc.).

Information is accumulating on the wide range of services provided by community pharmacies:

- These include *many kinds of health promotion services*, and in the case of illnesses, the promotion of rational prescribing and the appropriate use of medicines (Eickhoff and Schulz 2006).

In Sweden, pharmacists offer fitness check services, providing advice on weight loss, diet and health, as well as lectures on fitness, health and group exercises (Westerlund and Björk 2006).

Self- medication counselling service of upper gastrointestinal symptoms is offering in Belgium (Mehuys E et al. 2009).

- In many countries (e.g., the UK, Spain, Portugal, Scotland) communitypharmacists are involved in providing *methadone-supply services* to opiate-addicted patients (Gastelurrutia et al. 2005, Costa et al. 2006, Noyce 2007). Community pharmacy contributes to *drug misuse management* and reduced spread of blood-borne disease through distributing clean needles and substitute drug dispensing (Matheson et al. 2009). Moreover, a needle exchange programme is used in many EU countries (Gastelurrutia et al. 2005, EMCDDA 2005).
- Pharmacy based *screening service for perimenopausal and postmenopausal women* in USA. For example, a number of community pharmacies have developed niche services for these patients, such as osteoporosis screening, breast cancer risk assessment, or bioidentical HRT consulting and compounding. Other pharmacy care services that may be targeted to women in midlife include smoking cessation, weight management, and dietary supplement consulting (Shepherd et al. 2002).
- Community pharmacy *Osteoporosis risk screening service* for women provided in USA, Thailand (MacLaughlin et al.2005, Johnson et al.2008, Chaiyakunapruk et al. 2006).
- Some immunisation services were added in USA and Nigeria (Aderemi-Williams et al. 2007). And Community pharmacies may be as possible centres for routine immunization.
- *Smoking cessation services* are offered by pharmacists in many countries, including Finland (Gastelurrutia et al. 2005, Westerlund and Björk 2006, Eickhoff

and Schulz 2006, The Association of Finnish Pharmacies 2006a, Herborg et al.2007).

- Pharmacists are also urged to provide preventive care services to patients suffering from chronic disease (EuroPharm Forum 2008a).

For example, in Germany a pharmacy-based intervention *service for asthma* patients was proven effective and therefore the health insurance fund made a contract with the representatives of community pharmacists in order to take part in this programme (Eickhoff and Schulz 2006).

- In Portugal, community pharmacists have obtained reimbursement for *diabetes disease management* (Anderson 2005, Farris et al. 2005). This service is a combination between disease state management principles and a pharmaceutical care approach. The certified pharmacists analyse patient complaints, measure blood glucose against target values and review drug therapy between physician visits (Anderson 2005).

In many countries, pharmacies offer medication review services (Westerlund and Björk 2006, Herborg et al. 2007, Noyce 2007).

- In Finland, *automated dose dispensing for the elderly*, including medication review, is the first service mentioned in the Health Insurance Act that is reimbursed by the public insurance, which covers the whole population (Health Insurance Act 1224/2004). Also Email medication counseling services provided by Finnish community pharmacies (Pohjanoksa-Mäntylä et al.2008).
- Also In Finland *the patient counselling development project* TIPPA (2000-2003) promoted long-term professional development in community pharmacies (Puumalainen 2005, Kansanaho 2006). TIPPA was a systematic Project implemented in Finnish pharmacies nationwide. TIPPA project was supported by the Ministry of Social Affairs and Health, the National Agency for Medicines and the Social Insurance Institution, and these authorities were also actively involved in planning the project and following up on its progress. An important part of the TIPPA project was a drug information database (Tietotippa) created to support pharmacies in their daily work (Väänänen, 2008).
- *recognition of drug-related problems (DRP)* in pharmacies. For this purpose, a DRP classification model has been developed (Westerlund 2002, van Mil 2005, PCNE 2006). A huge effort has been made to create computer-based programs to identify DRPs, and in many countries, DRP identification, resolution and

documentation have been at the core of pharmaceutical care (Van Mil et al. 2004b). In Sweden the DRP classification system was incorporated into the Swedish community pharmacy software in 2001 (Westerlund 2002). During the first year, nearly 300,000 prescription and OTC related DRPs showed that adverse reactions were the most frequently documented type of drug-related problem (Westerlund and Björk 2006).

3 SERVICE QUALITY- A SPECIAL APPROACH TO QUALITY

3.1 Concept of quality

Service quality is a concept that has aroused considerable interest and debate in the research literature because of the difficulties in both defining it and measuring it with no overall consensus emerging on either (Wisniewski, 2001). There are a number of different "definitions" as to what is meant by service quality. One that is commonly used defines service quality as the extent to which a service meets customers' needs or expectations (Lewis and Mitchell, 1990; Dotchin and Oakland, 1994a; Asubonteng et al ., 1996; Wisniewski and Donnelly, 1996). Service quality can thus be defined as the difference between customer expectations of service and perceived service. If expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs (Parasuraman et al ., 1985; Lewis and Mitchell, 1990).

Always there exists an important question: why should service quality be measured? Measurement allows for comparison before and after changes, for the location of quality related problems and for the establishment of clear standards for service delivery. Edvardsen et al. (1994) state that, in their experience, the starting point in developing quality in services is analysis and measurement.

While there have been efforts to study service quality, there has been no general agreement on the measurement of the concept. The majority of the work to date has attempted to use the SERVQUAL (Parasuraman et al. , 1985; 1988) methodology in an effort to measure service quality (e.g. Brooks et al., 1999; Chaston, 1994; Edvardsson et al. , 1997; Lings and Brooks, 1998; Reynoso and Moore, 1995; Young and Varble, 1997; Sahney et al. , 2004).

3.2 SERVQUAL methodology

Clearly, from a Best Value perspective the measurement of service quality in the service sector should take into account customer expectations of service as well as perceptions of service. However, as Robinson (1999) concludes: "It is apparent that there is little consensus of opinion and much disagreement about how to measure service quality". One service quality measurement model that has been extensively applied is the SERVQUAL model developed by Parasuraman et al. (1985, 1986, 1988, 1991, 1993, 1994; Zeithaml et al., 1990). SERVQUAL as the most often used

approach for measuring service quality has been to compare customers' expectations before a service encounter and their perceptions of the actual service delivered (Gronroos, 1982; Lewis and Booms, 1983; Parasuraman et al., 1985).

The SERVQUAL instrument has been the predominant method used to measure consumers' perceptions of service quality. It has five generic dimensions or factors and are stated as follows (van Iwaarden et al., 2003):

(1) Tangibles. Physical facilities, equipment and appearance of personnel.

(2) Reliability. Ability to perform the promised service dependably and accurately.

(3) Responsiveness . Willingness to help customers and provide prompt service.

(4) Assurance (including competence, courtesy, credibility and security). Knowledge and courtesy of employees and their ability to inspire trust and confidence.

(5) Empathy (including access, communication, understanding the customer).

Caring and individualized attention that the firm provides to its customers.

It is important to note that without adequate information on both the quality of services expected and perceptions of services received then feedback from customer surveys can be highly misleading from both a policy and an operational perspective.

The research on measuring service quality has focused primarily on how to meet or exceed the external customer's expectations, and has viewed service quality as a measure of how the delivered service level matches consumer's expectations. These perspectives can also be applied to the employees of a firm and in this case, other major gaps could be closed in the service quality gaps model (Kang et al., 2002).

3.3 Quality assurance of pharmaceutical care services

A basic concept which should underlie all health care services and pharmacy practice is that of assuring the quality of patient care activities. Donabedian defined the three elements of quality assurance in health care as being structure, process and outcome (Donabedian A., 1980). Quality assurance processes of pharmaceutical care services serve to contribute towards better patient outcomes.

Definitions of the quality assurance of pharmaceutical care should encompass both technical standards and patients' expectations. While no single definition of health service quality applies in all situations, the following common definition is a helpful guide:

"Quality assurance is that set of activities that are carried out to monitor and improve performance so that the health care provided is as effective and as safe as possible".
(Quality Assurance Project, QAP, 1993)

Quality assurance can also be defined as "all activities that contribute to defining, designing, assessing, monitoring, and improving the quality of health care". These activities can be performed as part of the accreditation of pharmacies, supervision of pharmacy health workers, or other efforts to improve the performance and the quality of health services.
The Quality Assurance Project of the Center for Human Sciences in Bethesda, USA, lists four core principles which have emerged to guide quality assurance in health care:
1. Focus on the client/patient
2. Focus on systems and processes
3. Focus on measurement
4. Focus on teamwork
The implementation and practice of pharmaceutical care must be supported and improved by measuring, assessing and improving pharmacy practice activities, utilizing the conceptual framework of continuous quality improvement. A key lesson is that in many cases quality of pharmacy services can be improved by making changes to the health care system or pharmacy system without necessarily increasing resources. Improving the processes of pharmacy practice not only creates better outcomes but also reduces cost through eliminating waste, unnecessary work and repetition of work already done. Thus quality improvement must address both the resources (structures) and activities carried out (processes) to ensure or improve the quality of pharmaceutical care (outcomes) (WHO/PHARM/PAR/2006.5).

3.4 Quality indicators

Quality indicators have been developed throughout Europe primarily for use in hospitals, but also increasingly for primary care. Both development and application are important but there has been less research on theapplication of indicators (Campbell et al.2002).

Three issues are important when developing or applying indicators: (1) which stakeholder perspective(s) are the indicators intended to reflect; (2) what aspects of health care are being measured; and (3) what evidence is available? The information required to develop quality indicators can be derived using systematic or non-systematic methods. Non-systematic methods such as case studies play an important role but they do not tap in to available evidence. Systematic methods can be based directly on scientific evidence by combining available evidence with expert opinion, or they can be based on clinical guidelines. While it may never be possible to produce an error free measure of quality, measures should adhere, as far as possible, to some fundamental a priori characteristics (acceptability, feasibility, reliability, sensitivity to change, and validity). Adherence to these characteristics will help maximise the effectiveness of quality indicators in quality improvement strategies. It is also necessary to consider what the results of applying indicators tell us about quality of care (Campbell et al.2002).

Quality improvement has become a central tenet of health care. There are numerous reasons why it is important to improve quality of health care, including enhancing the accountability of health practitioners and managers, resource efficiency, identifying and minimising medical errors while maximising the use of effective care and improving outcomes, and aligning care to what users/patients want in addition to what they need (Shahian et al., 2007**)**. Quality can't be improved without measuring it.

Moreover, there are ways of assessing quality without using hard quantitative measures such as quality indicators—for example, peer review, videoing consultations, patient interviews. Measurement, however, plays an important part in improvement (Donabedian, 1980; Irvine, 1990) and helps to promote change (Juran, 1988).

3.4.1 Defining quality indicator

Indicators are explicitly defined and measurable items which act as building blocks in the assessment of care. They are a statement about the structure, process (interpersonal or clinical), or outcomes of care (McGlynn, 1998) and are used to generate subsequent review criteria and standards which help to operationalise quality indicators (Table 3). Indicators are different from guidelines, review criteria, and standards . Review criteria retrospectively assess care provided on a case-by-

case basis to individuals or populations of patients, indicators relate to care or services provided to patients, and standards refer to the outcome of care specified within these indicators. However, care very rarely meets such absolute standards (Seddon et al.,2001) and, in general, standards should be realistic and set according to local context and patient circumstances (Lawrence et al., 1998; Marshall et al.,2002). Indicators do not provide definitive answers but indicate potential problems that might need addressing, usually manifested by statistical outliers or perceived unacceptable variation in care (Campbell et al.2002).

Table 3. Definitions of guideline, indicator, review criterion, and standard

Guideline: systematically developed statements to assist practitioner and patient decisions prospectively for specific clinical circumstances; in essence the "right thing to do"(Forrest et al., 1996; Grimshaw et al., 1993).

Indicator: a measurable element of practice performance for which there is evidence or consensus that it can be used to assess the quality, and hence change in the quality, of care provided (Lawrence et al., 1993).

Review criterion: systematically developed statement relating to a single act of medical care that is so clearly defined it is possible to say whether the element of care occurred or not retrospectively in order to assess the appropriateness of specific healthcare decisions, services, and outcomes (Braspenning et al., 2001; Donabedian, 1982).

Standard: The level of compliance with a criterion or indicator (Lawrence et al., 1993; Eccles et al., 1996; Donabedian, 2000). A target standard is set prospectively and stipulates a level of care that providers must strive to meet. An achieved standard is measured retrospectively and details whether a care provider met a predetermined standard.

3.4.2 What should be measured

There are three important issues to consider when developing indicators. Firstly, which stakeholder perspective(s) are the indicators intended to reflect? There are different stakeholders of health care (patients, carers, managers, professionals, third party payers) (Donabedian A, 1980; Ovretveit J, 1992, Campbell et al.2002). It

cannot be presumed that one stakeholder's views represent another group's views (McGlynn, 1997; Joss R et al., 1995). Different perspectives may need different methods of indicator development, particularly as stakeholders have different perspectives about quality of care. Health professionals tend to focus on professional standards, health outcomes, and efficiency. Patients often relate quality to an understanding attitude, communication skills, and clinical performance (Campbell et al.2002).

Secondly, which aspects of care should be assessed — processes or outcomes of care?(Davies et al., 1995; Eddy, 2008; Mant et al., 1995; Palmer , 1997). The ultimate goal of the care given to patients can be expressed as outcome indicators which measure mortality, morbidity, health status, health related quality of life, and patient satisfaction.

Process indicators describe actual medical care such as diagnoses, treatment, referral, and prescribing (Marshall et al., 2002; Campbell et al., 1999). Since my focus is on quality improvement, my main interest in this paper is on process indicators because improving process has been described as the primary object of quality assessment/improvement (Donabedian, 1980; Irvine, 1990; Eddy, 1998; Palmer, 1998; Brook et al., 2000, Campbell et al.2002).

Thirdly, in order to develop indicators researchers need information on structure, process or outcome which can be derived in a number of ways using systematic or non-systematic methods. This information is vital to establish the face or content validity of quality measures (Campbell et al.2002) (Table 4).

Table 4. Definitions of acceptability, feasibility, reliability, sensitivity to change, and validity (Campbell et al.2002).

Development of quality indicators

- Face/content validity: is the indicator underpinned by evidence (content validity) and/or consensus (face validity)? The extent to which indicators accurately represent the concept being assessed (e.g. quality of care for epilepsy).
- Reproducibility: would the same indicators be developed if the same method of development was repeated?

Application of quality indicators

- Acceptability: is the indicator acceptable to both those being assessed and those undertaking the assessment?

- Feasibility: are valid, reliable, and consistent data available and collectable, albeit contained within medical records, health authority datasets or on videotaped consultations?
- Reliability: minimal measurement error, organizations, or practitioners compared with similar organizations or practitioners (comparability), reproducible findings when administered by different raters (inter-rater reliability).
- Sensitivity to change: does the indicator have the capacity to detect changes in quality of care?
- Predictive validity: does the indicator have the capacity for predicting quality of care outcomes?

3.5 Quality standards (ISO)

ISO 9001 - "Our success is measured by the success of our clients."

ISO 9001 is an international quality standard developed by the International Organization for Standardization (ISO), a worldwide federation of national standards bodies representing some 130 countries (QMI).

About the Standard. ISO 9001 can be applied to any type and size of organization, from small family-run businesses to the world's largest corporations and government institutions. It provides a structured yet flexible framework for a customer focused business management system that will drive business performance improvement (QMI).

ISO 9001 is based on the following eight Quality Management Principles, which are incorporated within the requirements of the standard, and can be applied to improve organizational performance:

- Customer focus
- Leadership
- Involvement of people
- Process approach
- System approach to management
- Continual improvement
- Factual approach to decision making
- Mutually beneficial supplier relationships

For management, an important benefit has always been improved financial performance. Many studies have shown that companies implementing a quality management system have realized cost savings through improved process effectiveness and efficiency. In addition to benefiting the bottom line, companies also realize many other advantages, including improved employee and customer satisfaction, resulting from better-defined and implemented business processes (Biazzo et al. 2003).

ISO 9001 is a general quality management system standard that consists of principles that help ensure standardized levels of quality are applied across all organizations and sectors of the Healthcare Industry including Pharmaceutical Companies, Ambulatory Care, Long-term Care Facilities, Hospitals, among others. Healthcare service providers often choose ISO 9001 as their primary management system registration and then evaluate how other standards may be of benefit to the organization, possibly through an integrated approach (Biazzo et al. 2003). With the implementation of a quality management system using ISO 9001, a health service provider can implement a process for continual improvement, as well as reduce inefficiencies and waste, thereby experiencing a significant cost savings, while maintaining a focus on patient/client satisfaction (QMI).

The concept of validation of community pharmacy services may be the tool that can lead to a breakthrough in solving this problem. Many suppliers have had their activities certified according ISO 9000 standarts. Pharmacists may have to use these or the similar quality control system to convince the payers to compensate them for their performance (Azzopardi, 2000).

4 MATHERIALS AND METHODS

4.1 Matherials

The study is based on case-reports of 18 community pharmacies from different International Pharmaceutical Federation (FIP) member countries around the world (Europe, Asia, South and North America). The participating pharmacies were recruited by the FIP Community Pharmacy Section (CPS) on the basis of the recommendations of the national professional organizations. The CPS representative directly contacted owners of the selected pharmacies and asked them to contribute to the study. The owners or their representatives were asked to fill in a data collection sheet mainly consisting of open-ended questions. Questionaire was divided into two parts: questions related to describing the range of pharmaceutical services provided by the pharmacy and the quality management system applied to assure the quality of practice. Other questions assessed the magnitude of business, business environment, patronage and collaboration with local health care providers. Some respondents are independent community pharmacies, but some belongs to community pharmacy chain. I analyze every question separately, to see the difference in performance in each participating country. Answers vary a lot, some pharmacies provided very detailed information, some just answered “yes/no”, and in some case-reports answers were skipped. China provided very general description about implementation of “Good Pharmacy Practice- GPP” in community pharmacies, that is why China is not analyzed question by question, but general systems work is overviewed. Two countries (Finland and Jordan) provided a very detailed information and description of the range of pharmaceutical services provided by the pharmacy and the quality management system applied to assure the quality of practice, case reports are prepared based on it.

4.2 Methods

The responses were analyzed partly quantitatively and partly qualitatively. The responses are reviewed by the content analysis method in order to identify pharmaceutical care practices and services implemented. Correspondingly a description of quality management practices will be constructed. The frequency of appearance of each action in different response will be recorded and it will be used

as a criterion for identifying the key quality standards applied. If applicable, the individual quality items found will be reviewed and reclassified into larger quality dimensions.

Received information from respondents and its amount vary a lot. On some questions there was no information provided. But also there was two countries, Finland and Jordan, which provided very detailed description of pharmacy organization, services are provided and system in pharmacy general. And this two countries were included in key- reports, with a general detailed description.

5 RESULTS OF THE RESEARCH

5.1 Basic Description

5.1.1 Type of pharmacies involved in the study

The first question in case reports was concerning types of community pharmacies (Independent, chain, and pharmacist-owned/governmental/private). A pharmacist or a chain privately owns most of participating community pharmacies. Pharmacist and two physicians own participating community pharmacy from Philippines. In Europe, mostly responding community pharmacies are 0, but also a chain, like in Norway and Macedonia, owns some of them. Participating in this survey pharmacies from Asia are privately owned by pharmacists, one is independent community pharmacy, but two others are chain pharmacies. In study were involved also two pharmacies from international chains (Table 5).

Table 5. Type of community pharmacies, countries and continents involved in current study.

Country	**Type of the pharmacy**	**Continent**
Zimbabwe	independent, pharmacist-owned private pharmacy	Africa
Jordan	privately-owned international community pharmacy chain(general description of a chain)	Asia
Philippines	private-owned community pharmacy chain (2 types of outlets: full store and fulfillment center)	Asia
Taiwan	independent, pharmacist-owned private pharmacy	Asia
Finland	independent, pharmacist-owned private pharmacy	Europe
Malta	privately owned community pharmacy	Europe
Macedonia	private independent community pharmacy	Europe
Macedonia	private-owned community pharmacy chain	Europe

Macedonia	private independent pharmacy	Europe
Norway	chain community pharmacy (international chain, 240 member pharmacies in Norway)	Europe
Mexico	chain community pharmacy (45 member pharmacies)	North America
Colombia	private pharmacy, owned by pharmacist and two physicians (dedicated to the alternative and complementary medicine)	South America
Uruguay	Pharmaceutical Chemical Property	South America
Uruguay	independent community pharmacy	South America
Chile	chain community pharmacy	South America
Chile	private chain community pharmacy	South America
Chile	independent pharmacy with 3 outlets	South America

5.1.2 Personnel in the pharmacies involved in the study

Second question was about personnel working in community pharmacies, and answers vary a lot. For example in pharmacy in Malta the majority of community pharmacies have only one pharmacist on duty at the particular time, and no technicians and other help stuff. The biggest number of personnel is in Uruguay (32), but interesting that there are only 3 pharmacists among them. The number of pharmacists in community pharmacy also very different, and the biggest number is in Finland's pharmacy (9) out of (13) total number of stuff. Also Finland was only country which divided amount of pharmacists in community pharmacy into Bachelors of Science, 3 years university education, and Masters of Science, 5 years university education. In Mexico there is also only one pharmacist and 12 other stuff in pharmacy. Jordan provided data about personnel in whole chain, half of stuff are pharmacists. Some countries provided information about specially trained stuff in

perfumery, Uruguay, Colombia. In average there are 2-3 pharmacists, 3-7 technicians and other staff, if available (Table 6).

Table 6. Personnel in community pharmacies in different countries involved in the study

Country	**Number of personnel**	**Type of personnel**		
		Qualified Pharmacist (M.Sc.or B.Sc in Pharmacy)	**Technician**	**Other stuff (perfumery, bookkeeper, etc.)**
Finland	13	9(2+7)	4	na*
Colombia	2	1	1	na
Philippines	19	7	12	na
Uruguay		2	6	na
Uruguay	32	3	12	8
Mexico	13	1	7	5
Malta	1	1	na	na
Macedonia	4	3	1	na
Macedonia	4	1	3	na
Macedonia	2	1	1	na
Norway	17	6	11	na
Taiwan	5	2	na	3
Zimbabwe	9	2	1	6
Chile	na	na	na	na
Chile	6	2	3	1(selling wine)
Chile	3	2	1	na
Jordan	300	145	na	155

*na- not available information

5.1.3 Premises of the pharmacy - description

Because this question was not detailed, respondents understood definition of premise differently. Some community pharmacies explained how it is built, but some, for example Finland, Mexico, Uruguay gave a description of aim of community pharmacy. After summarizing whole answers and descriptions, we can see, that community pharmacies surfaces wary in different countries. In Taiwan, there is limitation, that the minimum area in community pharmacy should be 16 sq. m., but in Malta pharmacy should have a dispensing area for the preparation and compounding of medical substances, which includes supply of drinking water and properly trained sink. A pharmacy areas (zones) description is different. In Philippines, each of the branches has an average area ranging from 80-120 sq.m. Divided into several areas: service area (dispensing area, counseling, customer waiting area), preparation area, storage area, drive throw area and window, dispatch area (call centre), dining area and comfort area for personnel, but in Macedonia area in pharmacy just divided into two – service area and storage (Table 7).

In Uruguay and Mexico community pharmacies tried to organize work according to Good Pharmacy Practice guidelines, assisting the patient in terms of dispensing and monitoring of therapeutic treatment, to cooperate with health care professionals to get the optimal result for the benefits of patient and implementation of pharmaceutical care. Mostly community pharmacies are situated in shopping malls or in city downtowns.

Table 7. General description of pharmacy premises

Country	Type of the pharmacy	Description of premises
Finland	independent, pharmacist-owned private pharmacy	Authorities decide if there is a need of pharmacy in commune. In Muhos area, there are 8500 inhabitants and one pharmacy. Pharmacy must have an opportunity to survive economically; usually there is not many pharmacies in one village.
Colombia	private pharmacy, owned by pharmacist and two physicians (dedicated to the alternative and complementary medicine)	Pharmacy is located in Medellin city downtown, the area of community pharmacy is 27, 5 sq.m.

Philippines	private-owned community pharmacy chain (2 types of outlets: full store and fulfillment center)	Each of the branches has an average area ranging from 80-120 sq.m. Divided into several areas: Service area (dispensing area, counseling, customer waiting area), Preparation area, Storage area, Drive throw area and window, Dispatch area (call centre), Dining area and comfort area for personnel.
Uruguay	Pharmaceutical Chemical Property	na
Uruguay	independent community pharmacy	Work according Good Pharmacy Practice, supply drugs and services for healthcare and helping the community to use the best possible way. Assisting the patient in terms of dispensing and monitoring of therapeutic treatment, to cooperate with health care professionals to get the optimal result for the benefits of patient and implementation of pharmaceutical care.
Mexico	chain community pharmacy (45 member pharmacies)	The aim of the pharmacy is based on Good Pharmacy Practice in order to improve community pharmacy services.
Malta	privately owned community pharmacy	The premises should have a dispensing area for the preparation and compounding of medical substances, which includes supply of drinking water and properly trained sink. The pharmacy should feature a toilet. The premises should not form part or communicate with premises used for

		habitation or with any other premises that is used for commercial purposes.
Macedonia	private independent community pharmacy	40 sq.m., it has all the needed conditions, all kinds of drugs, medical materials, baby products, OTC program, cosmetics, etc.
Macedonia	private-owned community pharmacy chain	Pharmacy is open type, contains all structures that pharmacy needs.
Macedonia	private independent pharmacy	Area divided into 2 parts – service area and storage
Norway	chain community pharmacy (international chain, 240 member pharmacies in Norway)	Located in second largest mall, in business area, between two largest towns
Taiwan	independent, pharmacist-owned private pharmacy	The size of the pharmacy must be larger than 16 sq. m., dispensing area must be larger than 6 sq.m., pharmacy needs to be isolated from other parts of business (can not share space with otheras). This community pharmacy is 200 sq.m., dispensing area is about 20 sq.m.
Zimbabwe	independent, pharmacist-owned private pharmacy	Pharmacy is located in shopping complex, closed to medical centre. There is kitchen, storage, dispensing area and two toilets, parking space (3 parking bays).
Chile	chain community pharmacy	na
Chile	private chain community pharmacy	The pharmacy is in one floor, with the customer service area of 20x5m, in which they have also the OTC self- service area and the prescription area of 10x3 m, dining room for the staff of 4.5x4m, office, and dressing room for the staff
Chile	independent pharmacy with 3	The three pharmacies are

	outlets	situated a near the hospital, near a large population of military, 3 in the centre of Santiago de Chile, near the ministry of defence. They all have identical colors, furniture, light and details related to identification of the staff.
Jordan	privately-owned community pharmacy chain (general description of a chain)	Pharmacies divided into prescription area and front area.

5.1.4 Analysis of clients in community pharmacies involved in the study

One of the questions in case-case reports was about analysis of clients visiting those community pharmacies. This summarized table of answers shows that the most frequent customers are women in middle age. The interesting exception is Columbia, where age of customers is 14-40, young women, and their purpose is dietary supplements and authorized products. However, most common purposes of visits are prescription drugs, OTC's, general sales, food supplements and advices about the use of medicines. Zimbabwe and Jordan have mentioned also cosmetics and baby products as one of purposes, Maltese clients are coming to make different kind of tests in community pharmacy. Daily number of customers is very different in different countries and it varies from 20 in Colombia, to 525 in Norway. Macedonia, Finland, Uruguay, Mexico and Philippines mentioned the same amount of customers per day; it is 300-350 (Table 8). Some of countries did not provide full information about clients, their age and daily number of customers that is why it is not possible to make whole analysis and comparison.

Table 8. Analysis of clients (their age, purpose, gender) and daily number of customers in pharmacies in different countries.

Country	**Daily number of clients (average)**	**Purpose**	**Age of customers (average)**	**Gender of customers (mainly)**
Finland	300	Prescription drugs	50-65	women

		and OTC		
Colombia	20	authorized products and dietary supplements	14-40	women
Philippines	300	prescription drugs(oncology and chronic medication), OTC, food supplements	30-50	women
Uruguay	210	prescription drugs and cosmetics	40-50	women
Uruguay	350 (personally and by phone)	Prescription drugs, OTC and advice	*na	na
Mexico	350	Prescription drugs and OTC, general sales	40-50	women
Malta	na	advice, Prescription drugs and OTC, tests	na	na
Macedonia	100	prescription drugs, OTC	50-70	both gender
Macedonia	250	Prescription drugs, OTC and general sale	20-75	both gender
Macedonia	300	na	40-50	na
Norway	525	prescription drugs, general sales, OTC	na	na
Taiwan	na	general sales, OTC, prescription drugs	40-70	women
Zimbabwe	120	prescription drugs, OTC,cosmetics,	na	women, women with children
Chile	na	na	na	na
Chile	200	prescription drugs, general sales, OTC	woman mature age	woman

Chile	157	prescription drugs, OTC,cosmetics,baby products	middle age	men
Jordan	250	prescription drugs, OTC,cosmetics,baby products	na	na

*na- not available information

5.1.5 Services provided by participating pharmacies

Community pharmacies in different countries provide wide range of different professional community pharmacy services. Finland's community pharmacy is one and only which is providing interaction checking service, prescription preservation and extension service and special advance counseling on chronic diseases. Uruguay's community pharmacy is providing dermocosmetics counseling service for diagnosing and treating skin. In Philippines, pharmacy customers can receive Daily Dose Packs with their prescription medicines, and there is online nutrition counseling available. Norway community pharmacy, for example, offer services for other healthcare professionals, like providing services to dentists, community health care officers (delivering drugs and information), private health centers and clinics (providing with drugs related information), institution services, health centers in north sea- oil installations. As it was already mentioned, in this survey took part independent pharmacies and pharmacies from chains. However, there not a big difference of services they provide, usually these services are: sales and advice on the use of medicines: OTC, prescription and medical supervision; sales and advice on use of cosmetics; health promotion services: control of blood pleasure and triglyceride; home delivery and mail service. More advanced services are provided by community pharmacy chain in Jordan, where customers could receive counseling 24 hours a day, also public lessons of medicines and computerized prescription service. But not all community pharmacies are providing such services as control of blood pleasure and triglyceride and cholesterol levels, which should be essential service in each community pharmacy as well as medication counseling service. Also not every community pharmacy was mentioned cooperation with other healthcare professionals (Table 9).

Table 9. List of services in different countries.

Country	**Type of the pharmacy**	**Services provided by the pharmacy**
Finland	independent, pharmacist-owned private pharmacy	• prescription preservation and refill in pharmacy; • interaction checking; • medication counseling for prescription and non-prescription drugs; • lessons of medicines; • home delivering service (if needed); • Special advances counseling about asthma, diabetes, blood pressure and cardiovascular diseases.
Colombia	private pharmacy, owned by pharmacist and two physicians (dedicated to the alternative and complementary medicine)	• general sales; • OTC'S ; • prescription drugs; • information, health promotion services; • home deliveries; • institution services.
Philippines	private-owned community pharmacy chain (2 types of outlets: full store and fulfillment center)	• medication counseling and recommendation on proper use of drugs ; • provision information on priority chronic diseases; • Daily Dose Pack; • online nutrition counseling; • Convenience Services (walk-in; drive-in; delivery). • companies and hospitals outsourcing • Partnership with various suppliers.
Uruguay	Pharmaceutical Chemical Property	• sales and advice on the use of medicines: OTC, prescription and medical supervision; • sales and advice on use of cosmetics; • health promotion services: control of blood pleasure and triglyceride; • home delivery • mail service
Uruguay	independent community pharmacy	• medication counseling of prescription and non-prescription drugs; • medication counseling via email;

		• health promotion services: control of blood pleasure and triglyceride and cholesterol levels; • dermocosmetics counseling center for diagnosing and treatment of skin; • agreements with medical institutions (cooperation); • home deliveries through the country; • magistral formulations.
Mexico	chain community pharmacy (45 member pharmacies)	• general sales; • OTC'S ; • prescription drugs; • information, health promotion services; • home deliveries;
Malta	privately owned community pharmacy	• medication counseling for prescription and non-prescription drugs; • health-related information (advices, promotion leaflets); • point-of-care testing; • home deliveries; • institution services.
Macedonia	private independent community pharmacy	• general sales; • OTC'S ; • prescription drug information ; • information, health promotion services; • home deliveries;
Macedonia	private-owned community pharmacy chain	• general sales; • OTC'S ; • prescription drug information ; • information, health promotion services;
Macedonia	private independent pharmacy	• Prescription drug information and education.
Norway	chain community pharmacy (international chain, 240 member pharmacies in Norway)	• general sales • Providing services to dentists, community health care officers (delivering drugs and information), private health centers and clinics (providing with drugs related information), institution services, health centers in north sea- oil installations.
Taiwan	independent, pharmacist-owned private pharmacy	• general sales; • OTC'S ; • prescription drug information ; • information, health promotion

		services; • home deliveries; • Referrals.
Zimbabwe	independent, pharmacist-owned private pharmacy	• high blood pressure monitoring; • Medication counseling on medical conditions and national issues (ex., hypertension, contraception, malaria, cholera, medication safety, HIV/AIDS.
Chile	chain community pharmacy	• general sales; • OTC'S ; • prescription drug information ; • information, health promotion services;
Chile	private chain community pharmacy	• OTC'S ; • prescription drug information ; • health promotion services: control of blood pleasure
Chile	independent pharmacy with 3 outlets	• general sales; • OTC'S ; • prescription drug information ; • information, health promotion services (blood pressure monitoring);
Jordan	privately-owned community pharmacy chain(general description of a chain)	• general sales; • private consultation areas to insure confidentiality; • OTC'S ; • prescription drug information ; • information, health promotion services; • home deliveries; • 24 h service; • computerized prescription; • training and drug information center; • public lecturing.

5.1.6 Economy and management in community pharmacies involved in the study

Economically biggest expenses are on personnel, this information mentioned Finnish community pharmacy, also because of price reference system investigation " it it's becoming more and more difficult with each year, sales margin goes more and more down, but all other costs go up". Management mostly is organized by pharmacists themselves in each pharmacy, but some participating community pharmacies had central economy departments (Mexico, Norway, Macedonia), or a private manager (Macedonia). In Philippines, community pharmacy organized the economy system

that way, to have No *brick and mortal* expenses because majority of their orders come throw call contact center (Table 10). Unfortunately, many responding pharmacies did not answer on a question concerning economy and management that is why information is not full and whole analysis is not possible. We can think that many pharmacies still are not familiar with quality management.

Table 10. Management and economy in participating community pharmacies.

Country	**Type of the pharmacy**	**Economy and management**
Finland	independent, pharmacist-owned private pharmacy	Economy: Biggest cost is on personnel, about half of sales margin. Common economical situation in pharmacy is bearable, but it's becoming more and more difficult with each year, sales margin goes more and more down, but all other costs go up. Management: consists of owner of community pharmacy and other personnel with Master's degree. Owner decides about economy, new personnel and future lines, but other personnel organize everyday work.
Colombia	private pharmacy, owned by pharmacist and two physicians (dedicated to the alternative and complementary medicine)	This is quite new pharmacy and now sales are under equilibrium point

Philippines	private-owned community pharmacy chain (2 types of outlets: full store and fulfillment center)	No *brick and mortal* expenses (majority orders come throw contact center), other pharmacies have a large investment on this. Management organize by management committee of pharmacists, but other pharmacies usually are managed by owners.
Uruguay	Pharmaceutical Chemical Property	na
Uruguay	independent community pharmacy	na
Mexico	chain community pharmacy (45 member pharmacies)	has a central economy department for 45 pharmacies
Malta	privately owned community pharmacy	na
Macedonia	private independent community pharmacy	pharmacy has one private manager
Macedonia	private-owned community pharmacy chain	Pharmacy is a part of pharmacy company, there is a special team that runs economy and management
Macedonia	private independent pharmacy	na
Norway	chain community pharmacy (international chain, 240 member pharmacies in Norway)	has a central economy department
Taiwan	independent, pharmacist-owned private pharmacy	na
Zimbabwe	independent, pharmacist-owned private pharmacy	na
Chile	chain community pharmacy	Pharmacy economy and management is organized and controlled by one director, who is responsible for ehole pharmacy
Chile	private chain community pharmacy	The management is made by pharmaceutical manager,

		who is authorized and capable to take care of taxation as well according the instructions of the central office of the pharmacy chain
Chile	independent pharmacy with 3 outlets	The Foundation, which ownes the pharmacies has one manager (retired general). He takes care of the social issues like education and health, however there is also one pharmaceutical director taking care of the buying, distributing, offers, pharmaceutical issues etc.
Jordan	privately-owned community pharmacy chain(general description of a chain)	na

*na- not available information

5.2 Quality management questions

Second part of questions were conserning quality management systems used in community pharmacies, the idea was to identify in-house guidelines and to receive more detailed information about how the quality management and development is organized.

5.2.1 Pharmacy vision, mission and quality policy

As it is known, that clear definition of vision and mission is very important in strategic planning, this question also is added to this servey. As it is shown in Table 7, mostly all community pharnmacies already defined there mission and vision, like Columbia, Macedonia, Mexico, Norway, Taiwan, Zimbabwe, Jordan. Some pharmacies are now in a process of developing the concept of vision and mission, as two community pharmacies from Uruguay- „It is starting to formally definethe lines of work that have characterizedthe company since its inception:to provide customers with a comprehensive pharmaceutical care to promote ethical and responsible manner in the proper use of medicines". Community pharmacy from Taiwan described community pharmacy's mission in increasing the number of prescriptions released in community pharmacy, because there 70% of all prescriptions are dispenced in the hospital. Unfortunatelly not every community pharmacy provided information, some just reply that they have mission and vision (See Table 11).

Table 12. Vision, mission and quality policy

Country	Vision /Mission/ Quality policy	Type of the pharmacy
Finland	There is, but no description	independent, pharmacist-owned private pharmacy
Colombia	Mission: to establish and provide pharmaceutical services focused on the customer, provide medicines and other products and equipments for healthcare, affordable and of excellent quality, looking for social profit, and the equipment in the service. Vision: in 2015 will be a pharmaceutical establishment consolidated as company, and known by its contribution to its user's life quality, its research and innovation vocation, and by rescuing the ethic postulates in pharmacy practice, aswell as the integration to health team. Quality policy: activities are based on a renewing ethics and professional commitment of the pharmacists with the patient and society, that is expressed in permanent effort to get bettr results, by designing and providing pharmaceutical care services and products that satisfy user's needs.	private pharmacy, owned by pharmacist and two physicians (dedicated to the alternative and complementary medicine)
Philippines	There is, but no description	private-owned community pharmacy chain (2 types of outlets: full store and fulfillment center)
Uruguay	Pharmacy is on the way of implementing a quality policy, no information about mission and vision	Pharmaceutical Chemical Property

Uruguay	Company beginning to work on defining mission, vision and quality policy	independent community pharmacy
Mexico	First of all the purpose of community pharmacy is to be a health centre, where internal and external clients could satisfy their needs conserning pharmaceutical care and rational use of drugs as central topics (internal clients are technicians, assistantsand pharmacist, and the external clients are phisicians, patients and other healthcare providers).	chain community pharmacy (45 member pharmacies)
Malta	The concept is applied through a research and academic project.	privately owned community pharmacy
Macedonia	Mission is to provide best health care, threatment, information ao good quality.	private independent community pharmacy
Macedonia	Mission is to provide best services for patients by having qualified and aducated stuff, special care for all the patient, and improvement of the quality of services.	private-owned community pharmacy chain
Macedonia	na*	private independent pharmacy
Norway	Vision and mission: Continiously make improvement to the best for the customer. By spending knowlege and experiance pharmacy is giving customers increased security and help them in keeping good health	chain community pharmacy (international chain, 240 member pharmacies in Norway)
Taiwan	Mission: Increasing the releasing rate and refilling the prescriptions in the community pharmacy. There is no quality policy in Taiwan yet.	independent, pharmacist-owned private pharmacy
Zimbabwe	Mission: to provide	independent,

Table 7. PTable 8. Table 11. Vision, mission and quality	qualified pharmaceutical services to customers and to meet needs of customers. There is no written policy.	pharmacist-owned private pharmacy
Chile	Pharmacies in Chile have the mission to take care of the medicines with good pharmaceutical practice, informed and etihical manner to protect and enhance the public health	chain community pharmacy
Chile	yes (no description given)	private chain community pharmacy
Chile	Mission: To give services, which are in a great importance socially; education and health for the members of the air force, both in active service and in retired.	independent pharmacy with 3 outlets
Jordan	Vision of pharmacy is to be the leading pharmacy in Middle East. Mission is always strive to meet or exceed our customer's expectations. Quality policy: Creteria: Better therapeutic outcomes, increase business profitability, providing advanced pharmacists performance, improve professional role of pharmacy practice and pharmacy perception, as well as improving customers satisfaction. Continiously improve quality by renewing and improving existing operational procedures.	privately-owned community pharmacy chain(general description of a chain)

5.2.2 Description of the processes, in-house guidelines and services in pharmacy

The question was , if processes and services are described, and does the pharmacy have some in-house guidelines concerning the processes? This question many respondents did not answer or did not understand properly. Also some pharmcacies replied that they do not have any described guidelines on services and any in-house guidelines.Community pharmacy chain from Jordan and from Norway gave a detailed, well organized description of quality assurance, and methods of developing standarts. In Finnish community pharmacy there is description of processes, like procurement process, OTC-process, prescription drug process, economy-HRM process, marketing process and rest-home process. Community pharmacy has in-house guidelines for all those processes. Some pharmacies established quality standarts that describe almost all processes and procedures in company, but still there are some who does not have even general understanding about quality management systems, as we can see from answers , see Table 12.

Table 12. Description of in-house guidelines and measurements , services and processes.

Country	Type of the pharmacy	Description of in-house guidelines, services and processes	In-house measurements concerning processed
Finland	independent, pharmacist-owned private pharmacy	There is description of processes, like procurement process, OTC-process, prescription drug process, economy-HRM process, marketing process and rest-home process. Community pharmacy has in-house guidelines for all those processes.	There is a in-home measurements (no description given).
Colombia	private pharmacy, owned by pharmacist	Pharmacy has a clear description of	There is no measurements

	and two physicians (dedicated to the alternative and complementary medicine)	strategic management process, marketing and comunications, standartization and continious improvement, research, pharmaceutical care, financial management and sales.	yet.
Philippines	private-owned community pharmacy chain (2 types of outlets: full store and fulfillment center)	Proceses and services are described in the pharmacy (no detailed information provided).	There is a in-home measurements (no description given).
Uruguay	Pharmaceutical Chemical Property	There are written processes: procurement, controls and commodity, storage, claims corresponding documentation file .	No measurements have been made so far.
Uruguay	independent community pharmacy	there are only protocols about technical pharmacy area's dividing.	Not competed measurements.
Mexico	chain community pharmacy (45 member pharmacies)	There is description of processes, like pharmaceutical care, dispensation, personnel training and pharmacy cleaning and sanitization.	Pharmacy has in-house measurements in pharmaceutical care (number of patients/number of interventions), personnel training (number of activities), information (number of leaflets), and general (survey about client's satisfaction.
Malta	privately owned	No	No

	community pharmacy		
Macedonia	private independent community pharmacy	No	No
Macedonia	private-owned community pharmacy chain	did not understand question.	did not understand question.
Macedonia	private independent pharmacy	na	Na
Norway	chain community pharmacy (international chain, 240 member pharmacies in Norway)	Norwagian pharmacy Association has developed quality standarts for phasrmacies. Community pharmacy developed a quality system that covers procurement processes, it consists of procedures and working instructions, and soon process and flow charters. There is a standart requirements to information about use prescription drugs.	Service parameters are measured monthly. Do not have requerements for OTC and general sales, but they have a precise tool to analyse the sale. Four times a year pharmacy receives a raport from pseudo customer (OTC sales and provided information).
Taiwan	independent, pharmacist-owned private pharmacy	No	No
Zimbabwe	independent, pharmacist-owned private pharmacy	No	No
Chile	chain community pharmacy	there are following instructions: a) Opening, installation, functioning and closing the pharmacy, b) the pharmacies have the responsibility to analyze chemicals, clinics, biochemicals, and other analyses with	na

		a manner supporting ones health, c) the requirements may contain parts from different instructions, d) they register following medicines dispense: the prescription drugs, control, psychotropical medicines, reclaims. e) the medicines needing registering should be followed and dated correctly and stored in the archives chronologically f) Follow the instructions of the pharmaceutical manager.	
Chile	private chain community pharmacy	All the guidelines effecting all the staff working at the pharmacy are literal. These can be the policy of exchanges, the deadlines, use of the customerdata, sexual disturbing, acting in the threatening situations, and acting with the collaborators.	na
Chile	independent pharmacy with 3 outlets	Not all, but in the chain they have a internal guidebook, sometimes communication	na

		orally or by e-mail, but the documents are not yet done.	
Jordan	privately-owned community pharmacy chain(general description of a chain)	Quality assurance department established quality standartsthat described all processes and procedures of the company. These standarts include retail, administrative and pharmacy practice procedures. Standarts are developed in a variety of forms, such as flowcharts, standard operating procedure (SOP) document or clinical practice guidelines.	Different indicators are designed to evaluate all elements involved in a process or a service. These elements include human resources, procedure, time, cost, outcomes, stakeholders and customers.

5.2.3 In – house pharmacy measurements concerning services and processes.

Only three community pharmacies answered that they have some in-house measurement systems, majority of respondents wrote that they have no (See Table 12).

In Jordan's participating community pharmacy chain different indicators are designed to evaluate all elements involved in a process or a service. These elements include human resources, procedure, time, cost, outcomes, stakeholders and customers. Community pharmacy chain from Norway is making the service quality measurements monthly. Do not have requirements for OTC and general sales, but they have a precise tool to analyse the sale. Four times a year pharmacy receives a rapport from pseudo customer (OTC sales and provided information). Data from Mexico shows, that pharmacy has in-house measurements in pharmaceutical care (number of patients/number of interventions), personnel training (number of activities), information (number of leaflets), and general (survey about client's satisfaction).

Also answers showed that some community pharmacies are not familiar with the topic of questions, or question was not well formulated.

5.2.4 Personnel management and development policy and in-house trainees.

In table 9 there is a summarized description of answers given by participating pharmacies about personnel, in-house trainees and management and development policy. Poor information was provided in date collection sheets concerning these questions, part of community pharmacies left this question unanswered, but some just mentioned that they do not have written policy and in-house trainees. And the term "in-house trainee" was defined and understood differently, some participants described training programmes in pharmacies, but some wrote about practicum's were in trainees in pharmacy. The reason could be very general question formulation.

Norway, Jordan and Philippines described the personnel management and development policy in their pharmacies. (See Table 13). Philippines community pharmacy has corporate training programme for employees; pharmacy staff training programme for pharmacy assistants, pharmacists, branch managers/ store officers management training programme and area operations officers' managers. In Zimbabwe there is an in-house training programme for new employees and pharmacy carries out informal training sessions based on interests of pharmacists. Norway's personnel policy is based on human rights principles that all employees are equals, regardless of gender, age, disability, cultural differences and sexual orientation.

Table 13. Personnel management and development policy in community pharmacies in different participating countries

Country	Type of the pharmacy	Personnel management and development policy	Pharmacy in-house trainee
Finland	independent, pharmacist-owned private pharmacy	Yes, there is a personnel management and development policy.	Do not understand the definition

Colombia	private pharmacy, owned by pharmacist and two physicians (dedicated to the alternative and complementary medicine)	No	No
Philippines	private-owned community pharmacy chain (2 types of outlets: full store and fulfillment center)	No information given	There are following training programs: Corporate training programme for employees; pharmacy staff training programme for pharmacy assistants, pharmacists, online health professionals (pharmacists, nurses, nutritionists); branch managers/ store officers management training programme; area operations officers managers training programme; special professional services training programme etc. There is other training relevant to the position held (in-house and outside trainings).
Uruguay	Pharmaceutical Chemical Property	No written policy. Stuff is training through internal talks on topics of interest.	No
Uruguay	independent community pharmacy	No	There is internal and external trainings, supported by Ministry of Public Health.
Mexico	chain community pharmacy (45 member pharmacies)	Yes there is (but no explanation given)	No in-house trainees, but pharmacy organize and pays half of technicians course

			price.
Malta	privately owned community pharmacy	No	No
Macedonia	private independent community pharmacy	No	No
Macedonia	private-owned community pharmacy chain	No written policy.	Pharmacy organize educative management sessions (no description) .
Macedonia	private independent pharmacy	No	No
Norway	chain community pharmacy (international chain, 240 member pharmacies in Norway)	Policy is based on general principles that all employees are equals, regardless of gender, age, disability, cultural differences and sexual orientation. To be predictable and fair are two central principles of personnel management and development policy.	The pharmacy has no in–house trainees at the moment. Some nearby pharmacies have foreign pharmacists, as in-house trainees.
Taiwan	independent, pharmacist-owned private pharmacy	No	No
Zimbabwe	independent, pharmacist-owned private pharmacy	No	There is in-house trainings for new employees, but no written manuals. Pharmacy carries out informal training sessions based on interests of pharmacists. There also are organized trainees for students during practice time.
Chile	chain community	Pharmaceutical inspector, who in	na

	pharmacy	periodical visits monitors the functioning and completing the development of the pharmacy and its services, controls the health services.	
Chile	private chain community pharmacy	No, the sale of the medicines are followed with economical principles	na
Chile	independent pharmacy with 3 outlets	They have computer programs, which can evaluate the functioning of the pharmacy, inventory; Mostly the technical capabilities do not concentrate and medicines, more to the selling, attention and computer programs. Part of the technical staff has participated in courses supporting the work with medicines and the documents of the lectures are in use at the pharmacy. In addition, they have done course for young adults to support rational medicines use and take care of interactions.	na
Jordan	privately-owned community pharmacy chain(general description of a chain)	Personnel management and development is met through training, continuous	On-the-job training includes: using software, dispensing guidelines, inventory control, refill of insurance

		education and performance appraisal system. By integrating knowledge, skills and positive attitude, they provide all visitors patient and customer care.	prescriptions, storage conditions and products, compounding extemporaneous formulations and merchandising.

5.2.5 Information, sources and IT support.

Mostly all pharmacies nowadays have internet connection and access to databases and web resources. Also books, journals and other press is widely used in everydays life.

As we can see from answers (see Table 14), generally all pharmacies have internet access, web database access and software. Often there is also computerized Stock merchandise, customer database and history of consuming. Some pharmacies, for example Jordan, has software system with monitoring of side effects, drug interactions and contindication. Taiwan mentioned web connection system with Health Insuarance Company and Local Healthcare Centre, but Jordan and Norway have intranet (database among pharmacies in chain) connection between all members. In Philippines pharmacy has its own Management information Systems Department which takes care of IT infrastructure and provide support.

Table 14. Information, sources and IT support in community pharmacies in different countries

Country	**Type of the pharmacy**	**IT support and info sources**
Finland	independent, pharmacist-owned private pharmacy	Information sourced have via web through different data-base programmes.Every computer has an internet comnnection. Also IT support is arrranged.
Colombia	private pharmacy, owned by pharmacist and two physicians (dedicated to the alternative and complementary medicine)	Pharmacy counts with a complete electronic library in several medical issues. There is an accountant software, but no specific programme to to support pharmaceutical care

		activities.
Philippines	private-owned community pharmacy chain (2 types of outlets: full store and fulfillment center)	Company has its own Management information Systems Department which takes care of IT infrastructure and provide support.
Uruguay	Pharmaceutical Chemical Property	Pharmacy has a permanent internet access, Stock merchandise is fully computerized, there is also a customer database and history of consuming.
Uruguay	independent community pharmacy	No information given.
Mexico	chain community pharmacy (45 member pharmacies)	Pharmacy stocks information in different formats ranging from traditional printed matherials, such as books, journals to audio-visual and electronic media.
Malta	privately owned community pharmacy	British National Formulary and Martindale are the main resouces used .
Macedonia	private independent community pharmacy	Yes, it has. (no description given).
Macedonia	private-owned community pharmacy chain	Pharmacy has all sources for information support and IT control (no description given).
Macedonia	private independent pharmacy	Internet information's and medical journals ; outsources IT support
Norway	chain community pharmacy (international chain, 240 member pharmacies in Norway)	Pharmacy has information sources: Instore management system, intranet-information system among all community pharmacies in this chain, Personnel planning tool. And IT support .
Taiwan	independent, pharmacist-owned private pharmacy	IT connection with local health department, National Health insuarance, and Department of

		Health.
Zimbabwe	independent, pharmacist-owned private pharmacy	There is a limited internat access, large collection of books and scientific literature (Martindale, BNF, Merck Manual, etc.)
Chile	chain community pharmacy	The handbooks, internet, symposiums, conferences, courses and publications
Chile	private chain community pharmacy	Yes, but some information sources are not used always; they should be up-dated and support technology and external firms.
Chile	independent pharmacy with 3 outlets	Series of information on sales, credits, win, documentations, products; they also have guides and computer center to solve problems, which cannot be solved at phone. There is a big problem with time, there are not sufficient amount of personal and they have it very busy. For this reason, they have only limited possibility to seek information. Sometimes they have use whole days just to solve problems.
Jordan	privately-owned community pharmacy chain(general description of a chain)	Every community pharmacy is equipped with PH1 software, where all patients history are stored. This system provide to pharmacists also information about side effects, drug interactions, and contrindications. Pharmacy training centre and drug

		iformation centre are equiped with DIC system, which is management system.

5.2.6 Connections to other health care providers

As cooperation as one of the most important activities in health care, the question about connection with other health care providers was added also to this study. But received date failed our expectastions, because still many pharmacies have no, or rather poor connections with other healthcare providers, and exist in isolation.
Psysitions, Other pharmacies and Pharmacists Organizations are the main cooperation partners for participating pharmacies (See Table 15).

Table 15. Pharmacies cooperation with other health care providers

Country	**Type of the pharmacy**	**Connections to other health care providers**
Finland	independent, pharmacist-owned private pharmacy	These connections are rather poor.
Colombia	private pharmacy, owned by pharmacist and two physicians (dedicated to the alternative and complementary medicine)	The only currently available connection is with medical service.
Philippines	private-owned community pharmacy chain (2 types of outlets: full store and fulfillment center)	Pharmacists in the management committee are active officers and members in pharmacists Association and are representatives of this organization in various multidisciplinary programmes.
Uruguay	Pharmaceutical Chemical Property	Has no connections
Uruguay	independent community pharmacy	No information given
Mexico	chain community pharmacy (45 member pharmacies)	No information given
Malta	privately owned community pharmacy	In Malta, doctors and other healthcare professionals have their private clinics within pharmacies. This allows

		for many interactions between the pharmacists and other health providers.
Macedonia	private independent community pharmacy	Pharmacy has connections with some hospitals, private clinics, doctors and other medical persons.
Macedonia	private-owned community pharmacy chain	Pharmacy has connections with other community pharmacies and especially with a neighborhood institution that provide health care.
Macedonia	private independent pharmacy	None at the moment
Norway	chain community pharmacy (international chain, 240 member pharmacies in Norway)	Pharmacy has cooperation with other pharmacies in continued education of their staffs.
Taiwan	independent, pharmacist-owned private pharmacy	No connection with other health care providers.
Zimbabwe	independent, pharmacist-owned private pharmacy	Cooperation with Pharmacists Organization, physicians and students
Chile	independent, pharmacist-owned private pharmacy	With clinics, consults hospitals about the problems of expensive or special pharmacy made medicines.
Chile	chain community pharmacy	No
Chile	private chain community pharmacy	Often have connections, are working with medicine distribution with pharmaceutical laboratories, and also taking care of the wellbeing in the society in Conapran, Intendencia and metropolitan area
Jordan	privately-owned community pharmacy chain(general description of a chain)	Pharmacy chain has a good connection with drug companies, physicians, and other pharmacists.

5.3 Case studies (Detailed description of quality management systems in Jordan and Norway).

5.3.1 Jordan

Basic description

This participating in our survey international community pharmacy is a chain community pharmacy. First pharmacy chain was established in Jordan in 2001. By the end of 2006 there were 2000 pharmacy outlets in Jordan (1 pharmacy for every 3,200 individuals). The practice of retail pharmacy in Jordan (as well as the entire region) is changing. Just a few years ago, all of the retail pharmacies in Jordan were owned by pharmaciest, and managed as independent units (independent pharmacies). The acitvities performed by these pharmacies were restricted to purchasing and selling Rx drugs and a limited selection of OTC items. However, the outlook for the retail pharmacy business is changed with the opening of pharmacy chain participating in our survey (the participant), as the first chain pharmacy in Jordan.

Customers have shown that they value the services provided by the chain-type pharmacy which was reflected in the financial performants of the participant. This success could be attributed to several reasons, including (1) the range of clinical services provided to patients, (2) consistency in appearance and services across all locations, (3) store size and (4) wide range of products.

Based on changes on the structure and dynamics of the health care system in the Middle East and North African (MENA) countries, it is expected that pharmacy practice in the entire region will transform from solo independent ``mom and pop´´ shops into chain-type pharmacies. With these transformation the key success factors in the retail pharmacy business will also change. Competitiveness will depend more on the ability to offer differentiated services both clinical and clerical, as well as implementing prudent inventory management systems.

Tha chain pharmacy experience in Jordan can be replicated in other markets in Middle East and North Africa, especially that most of these markets share the same fundamentals.

Chain in Jordan. Today the participant employees are more than 300 people, including 145 pharmacists making the largest employer of pharmacist in Jordan.

Premises

In the participant pharmacies, the pharmacists follow defined policies and precedures to provide a consisntent level of excellent customer service, and we make sure that we have enough pharmacists to serve our costumers in a timely manner so that they are not kept waiting for service.

Customers can easily pick their needs out of the full and diversified range of OTC products, Personal Care, Medicated Cosmetics, First Aid and Baby Care Products.

At different locations in the Front area, customers find continuously updated educational material that provides both advice and consultations on several commonly asked about topics, like proper use of medication, the importance of vitamin use, and first aid tips, etc.

Some of our pharmacies work 24/7 and we also offer our customer free delivery services around the clock.

Services provided by participating community pharmacy chain:

1. Regional chain pharmacy with Jordan as the base country
2. High standard of clinical services and customers care.
3. Spacious Pharmacy outlets.
4. One stop shop for Rx drugs and OTC items.
5. High traffic areas with ample car parking.
6. Corner lots, on two main streets.
7. Passion for extraordinary customer care.
8. Computerized prescription processing.
9. Advanced medication labeling system.
10. Direct insurance billing.
11. Private consultation areas to insure patient confidentiality.
12. 24-hours service.

Quality management

Vision and Mission: to be the leading pharmacy in the Middle East. Mission of the participant is to always strive to meet or exceed our customer´s expectations.

Quality policy:

Criteria of Quality:

- Better therapeutic outcomes by better use and administration of medications through patient counseling and education.
- Increase business profitability by increasing productivity of employees, decrease repetition of work, time management, and standardization.
- Designing our precesses to be prevenetion driven instead of correction driven
- Providing advanced pharmacist performance because of gaining self satisfaction
- Improve pharmacy perception and profession role pf pharmacy practice
- Improve customers' satisfaction and maintaining their confidence in our services
- Continuously improve quality by reviewing and improving existing operational procedures.

Description of Services and Process:

Quality Assurance (QA) department establishes quality standards that describe all processes and procedures of the company. These standards include: retail administrative, and pharmacy practice procedures. Standards are developed in a variety of forms, such as flowcharts, standard operating procedure document, or clinical practice guidelines.

Method of developing standards in the participant is:

1. Determination of the issues and topics for which the standards are being developed.
2. Discussion of stakeholders' expectations and incorporating them in the development process of the standards
3. Gathering information about current practices related to the topics of standards
4. Preparing draft standards
5. Practicing the standards
6. Approval of standards

All the documented quality standards are distributed to the related departments and outlets in the participant. Thus, employees can use them as guidelines for performing their tasks.

Measurement of processes and Services:

All standards are developed in such a way that they are realistic, valid, clear, and measurable. Different indicators are designeed to evaluate all elements involved in a process or a service. These elements include: human resources, procedure, time, cost, outcomes, stakeholders and customers.

Personnel Management and Development:

Trainings

Personnel management and development is met through training, continuous education, and performance appraisal system. By integrating their knowledge, skills and positive attitude, they provide all our visitors optimal patient and customer care.

All community pharmacy pharmacists go through intensive Induction Training. This training includes several important topics needed to executive their jobs with the highest degrees of professionalism and excellence, such as pharmacology, customer care, and effective counseling and communication skills.

On-the-job training includes: using software, dispensing guidelines, inventory control, refill of insurance prescriptions, storage conditions of products, compounding extemporaneous formulations, and merchandising.

Continuous Education

While on job pharmacists are continuously updated with the latest scientific knowledge through the Continuous Education Program, where pharmacists have to pass a specific number of credit hours of training yearly.

Performance Appraisal System

Annual performance appraisals are prepared for our emplyees by departments' managers.

Operational Information Sources and IT Support: Two softwares are used.

The systems stores patients' pharmaceutical history and allows the pharmacist easy and fast retrieval of the patients information in any of our branches. Also, the system provides the pharmacist with information about most common precautions, side effects, drug-drug and drug-food interactions, and contraindications.

It also generates a printed label that explains to the patient how to use the medication, proper storage conditions, expiry date and special warnings.

The system provides pharmacists and management all data related to all aspects of operation within retail pharmacy business including: purchasing, point of sales, inventory management, statistical analysis, and accounting.

Training and Drug Information Center is equipped with the second system. Drug information providers in the center use the system to keep patient history file and to store all received inquiries and related answers.

Connections to Health Care Providers:

Other health care providers can benefit our drug information center to get updated information about medications.

Monthly meetings for our pharmacists are sponsored by drug companies; which organize scientific lectures that presented by various health care providers (physician or pharmacist).

Physicians and external pharmacists can participate in our workshop and educational activities that organized by the pharmacy chain Training and Drug Information Center.

5.3.2 Norway

Basic description

Representative from Norway was a pharmacy from international chain. This chain has a about 240 members around the country. our participating pharmacy is located in Norways' second largest mall with about 160 stores. The mall is located in a business area between the two largest towns on the south-west coast.

Daily average number of all customers is 530 and 290 of them are customers with prescriptions.

The main task of pharmacy is general sales, but also pharmacy provides additional services to dentist, community healthcare offices - both delivery of drugs and drug related information in form of bulletins, private health centers and clinics, institution services, health centers in the north sea – oil installations.

Quality management questions

Vision and mission and policy: „We will through overall qualtity thinking and conscious choices be deleting pharmacy chain in Norway and continuously make improvement to the best for the customer. By spending our knowledge and experience we will give our customers increased security and help them in keeping good health. This is achieved by: being close and available, secure high quality in value chain from supplier via wholesaler, doze package, pharmacy and to the customer, give professional advice and offer safe products and services, recruit, develop and keep qualified and enthusiastic staff members, be partner with all participants for increased patient security and better economy in Health-Norway, having pro-active co-operation with autorities for correct and efficient use and distribution of pharmaceuticals. This commit the management and all staff member to everyday being challenged by themselves and one another to improvement and development of quality."

Surveys pharmacy has developed a quality system that covers the procurement processes. The quality system consist of procedures and working instructions, and soon process and flow charters. The quality system is valid for all chain members, 239 pharmacies.

In-house measurement concerning the processes

Surveys parameters are measured monthly-the requirements of the guidelines: 97% delivery of Rx. Pharmacy has no requirement for OTC and general sales, but it have precise tools to analyse this sale. For times a year pharmacy receives a rapport from ' Mystery Shopper' testing OTC-sales and given standard information to the use of the drugs and to general sales. There are standard requirements to information about use prescription drugs. All staff are obliged to use this standard.

Information sources

Pharmacy has in-store management system, intranet information system which contains news, quality system, deviation reporting system, KPI reporting, discussion groups, competence mapping tools and personnel planning tool. It is supported and organized by the Norwegian Pharmacies Association. All qualitiy documents are available in intranet system and the implementation of the quality documents is compulsary for all pharmacies. Every employee is obliges to know and practice all the quality documents that concern their daily work.

Connections to other health care providers

Pharmacy is working in cooperation with other pharmacies in continued education of staffs. Lectures in pharmacology, pharmacotherapy, drug use and drug delivery practice in community health service are organized by pharmacy chain.

Discussion

In this study we have made an attempt to shed a light on a range of pharmaceutical care services offered by the selected community pharmacies originating in different FIP member countries, and we have tried to evaluate the quality management systems that have evolved so far in these pharmacies.

We stressed the importance of the guidelines for Good Pharmaceutical Practice developed by FIP. These guidelines are supposed to set the standards for the quality of pharmacy services provided by pharmaceutical organisations at different levels. The aim of this study was to explore to what extent different requirements of good pharmacy practice are in fact followed by the community pharmacies selected by FIP all over the world.

In this paper we supported the position, according to which quality improvement must address both the resources (structures) and activities carried out (processes) to ensure or improve the quality of pharmaceutical care (outcomes). We presented the results of the FIP survey in line with this theoretical framework. In doing so, we have discussed the characteristics of different pharmacies participating in the survey. Secondly, our purpose was to describe particular arrangements set in these pharmacies in order to meet the health services quality criteria outlined by FIP.

However, it should be emphasised that the assessment of health care services quality on the basis of the FIP survey among different community pharmacies proved to be a challenging task, and, mainly, due to the versatile nature of the concept of quality itself, and, in addition, due to the limitations of the available data.

We have discussed different quality indicators and approaches that can be employed when measuring health care services quality. Because there is no agreement among the scholars on the instrumental variables that should be used in order to estimate the quality of services, developing reliable empirical tools for analysing the quality of community pharmacy services is a process coupled with a number of difficulties. And, in this sense, our paper reveals many uncertainties, in particular, regarding the questionnaire used by FIP to measure the quality of pharmacy services.

First of all, we find that it has its own advantages and disadvantages. The fact that the questions used in the FIP survey were open and the techniques employed were qualitative can be considered as a goal of the study. It provided the respondents representing different community phramacies with the opportunity to express their

opinion about different sides of the functioning of these pharmacies: vision, mission and quality policy of the pharmacy; in-house guidelines describing different processes in the pharmacy; in-house measurements concerning the services provided; policies on personnel management and development; information sources and IT support; connections to other health care providers; other issues of interest.

However, various definitions of 'quality' of pharmacy services discussed in our literature review suggest that the above categories were not exhaustive in order to provide a comprehensive assessment of pharmacy services. Some other categories could be included.

For example, additional questions could be added in order to reveal the extent to which pharmacies are oriented towards providing the best service to consumers. In fact, the aim of the questions given in the survey was to explore the respondents' vision of the processes taking place in the pharmacy in general, the questions asked were also in regards to the connections of the pharmacy with health care providers. Therefore, the importance of the communication with and feedback from the consumers was not stressed in questions designed by FIP, although the mission of the 'Good Pharmacy Practice' and standards for quality of pharmacy services is *to ensure that the services provided by all practicing pharmacists to* ***every client*** *are of appropriate quality*. In other words, the most important element is the commitment of the pharmacy profession throughout the world to promotion of the excellent pharmacy services for the benefit of those served.

However, the questions reveal the nature of the participating pharmacies and the services they provide, the processes they run, representatives of the community pharmacies describe the organisation they are employed at, but the *figure of the consumer as such does not stand out in this survey*. The only reference to the 'client' is given in the question related to the range of services provided to the pharmacies' clients.

Thus, the questionnaire could also include questions telling us whether the opinions of consumers are important when developing the strategy, the vision of the mision and quality policy in the pharmacy, whether the pharmacy takes into account the degree of satisfaction of the clients with its service and their possible complaints, whether it has some regular polls among its customers measuring this satisfaction.

Also the categories already included in the questionnaire could be in some cases reformulated, or divided into sub-categories, or there was a possibility to get some

additional details from the respondents by including in the list some other accompanying questions on each matter of the concern. Perhaps, if some questions were reformulated, we would not get ‘yes/no’ replies from the respondents. For example, the typical question was indicated in the questionnaire in the following form: ‘Are there/is there ‘subject of the concern’ (for example, mission, in-house-guidilines, measurements concerning the processes) in your pharmacy?’. We consider that such questions had to be also followed by a short specialising phrase: ‘...if so, what are they (by ‘they’ we mean guidelines, measurements, whatever to be revealed in the study). If this was the case, the possibility of getting more detailed answers would be much higher. As this study was supposed to be qualitative, the designers of the questionnaire could pay more attention to the style and the format in which questions were asked. That is crucial, especially, if the aim was to get detailed answers from the respondents, that could be then analysed using content-analysis techniques.

In addition, given the fact that the respondents tend sometimes to embellish the reality, we can never guaruantee that the answers they give are reliable. Therefore, they might tend to answer positively to all the questions when it comes to maintaining the good reputation of their pharmacy. So if the questions were more detailed, we could get more reliable answers, because the respondents would have to support their ‘yes’ answers by concrete examples and facts.

In addition, in some cases, the questions were formulated in quite a complicated way, and respondents could not give comprehensive answers to them and our needs were not met in some cases. The need to formulate these questions in a more understandable manner is even more critical if we take into account the fact that English language was not a primary language for the selected respondents.

In our opinion, one way of dealing with all the above problems could be a preliminary pilotage of the questionnaire that could detect areas of potential concern or questions that represent difficulties for respondents. As a result, with such an initial testing of the questionnaire we could get more valuable and appreciated findings.

Another way of interpreting the limitations of our data is to refer to the lack of the knowledge of the respondents themselves, and not to the imperfections of the empirical tools used to assess the quality of the pharmacy services.

We can conclude that in most of the pharmacies selected for the investigation the awareness of the respondents regarding the activities undertaken in the relevant pharmacies in order to improve the quality of the services is not sufficient enough. In this sense, it is worth mentioning that we are not aware about all the characteristics of the sample included into the analysis. We know which pharmacies were selected for the analysis, but we do not have details on the profiles of the respondents whose responses were expected to be analysed in this study. Different positions they might held in their relevant organisations can explain their different degree of awareness of the quality organisation systems of their pharmacies, and they can also reflect the variations in the answers given by the respondents.

At the same time, we were surpised by the volume of information provided by the respondents in the cases of the investigation in Jordan, Finland and Norway. For these 3 countries we were able to provide detailed case-studies on the quality management systems supported in the selected pharmacies.

The results of the case-studies show that the activities undertaken in these countries in order to improve the quality of the pharmacy services are quite specific. Nevertheless, the aim of this study was just to stress the differences between the pharmacies but not to undertake a comparative analysis of quality management systems of the selected pharmacies.

It should be mentioned that we find it hardly possible to conduct a comparison of the pharmacy services on the basis of the responses from the above 3 pharmacies, not to speak of the identification of differences and similarities between all other pharmacies. This is not only due to the imperfections of our data, but mainly due to the fact that the pharmacies selected for the investigation can not be considered as a homogenuos group. The only feature that unites them is that they are based in the locations for which the FIP standards are specified. The given pharmacies are of various types, they are characterised by different financial capabilities and the level of human capital, and they originate in different countries characterised by the unique conditions of their social and institutional enviroment.

The most important moment here is that all the above factors contribute to the understanding of what forms quality in each community pharmacy. The pharmacies selected for the analysis, indeed, have showed the signs of their will to comply with the widely accepted FIP standards. Nevertheless, we should not forget that the vision of the quality of the pharmaceutical care varies between all the above countries, and

what consitutes quality of pharmacy services in Finland is not the same as the criteria framing the essence of ‘quality’ in China. If the quality of the services in one country has one meaning, in another country it might have absolutely another underpinning context.

Consumers also have different expectations of what forms qualified pharmaceutical services in different countries, and, as a result, pharmacies’ strategies are guided by their customers’ needs. If the patients’ requirements are not too strict or high enough, pharmacies will adapt and confine the services they provide to the limited needs of their customers.

Therefore, we can not talk about any degree of convergence between pharmacies originating in different FIP countries in terms of the characteristics of their qualiy management systems. However, they all, definitely, strive to achive a certain degree of excellence and they have the ambitions to improve their pharmacy quality standards. In doing so, some of them have been more successful so far, while others still have to undertake significant restructuring strategies (for example, community pharmacies in some countries (e.g. Philippines, Uruguay, Macedonia) do not even have a vision of their mission yet, the representatives of these pharmacies are not aware about that mission, or these pharmacies are only in the initial phase of defining their mission and quality policies).

Conclusion

Overall, we suggest that the contribution of this study is that it is not only dealing with the existing theoretical approaches towards the measurement of pharmacy services quality, but it also represents an attempt to derive significant empirical results based on the analysis of the data obtained by FIP. We suggest that the results obtained in this study can be used by FIP and other structures for their own reference. Our study represents an effort to show whether the reality observed in different pharmacies corresponds with the FIP standards and proposals. We aimed to find out what actions have already been undertaken by the community pharmacies in order to develop services quality systems matching with these standards, and what else remains to be done in the future.

We consider that we have achieved the main objectives of this research, and we have compiled data on different aspects of the functioning of the community pharmacies

selected by FIP. We have described the foundations of the pharmacies that participated in the FIP survey, and assessed the processes they run in order to support the quality management systems. We are not providing in this paper any comparisons between different pharmacies in terms of the level of their services quality (due to the reasons stated above). Rather the situation in each particular pharmacy is considered separately against the FIP standards.

We consider that the analysis of the responses of the representatives of community pharmacies in each country included in the FIP survey forms a basis for encouraging further initiatives by stakeholders at all levels aimed at improving the existing quality management systems. Our suggestions for further research also include the need to obtain the data on different aspects of the quality management systems in all the community pharmacies originating in particular countries. This will allow to make judgements regarding the extent to which different pharmacies belonging to one country follow the FIP recommendations, and to identify in each country the leader-pharmacies and the pharmacies that lag behind in terms of the degree of the FIP standards implementation.

We have revealed in this study a number of uncertainties associated with the assessment of quality of services in the community pharmacies. These uncertainties relate both to the tools used to measure the quality of the pharmaceutical care, and to the level of awareness of the representatives regarding the activities undertaken in their pharmacies.

From the one hand, the designers of the FIP survey discussed in this paper, to our opinion, need to elaborate the tools they have employed to measure the quality of the pharmaceutical care. And, from the other hand, the knowledge of the representatives of the community pharmacies in regards of the processes going on in the relevant pharmacies appears to be in most cases unsatisfactory.

Therefore, the main lesson that can be derived from our analysis is that the figure of the consumer (namely, patient) appears to be trapped in the duality of the above uncertainties. There is still a lot of work that needs to be done in order to meet the requirements of the patient, and still many issues that need to be addressed by the scholars, policymakers and pharmacists in order to improve the level of the quality of the pharmaceutical care services. The current study may serve as a starting point for further research in the given area.

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