

**Charles University in Prague**  
**Faculty of Pharmacy in Hradec Kralove**  
**Department of Social and Clinical Pharmacy**

**PHARMACEUTICAL CARE – PHARMACEUTICAL SERVICES IN  
GREECE AND THE EUROPEAN SURROUNDING**

**Diploma Thesis**

**FARMACEUTICKÁ PÉČE – FARMACEUTICKÉ SLUŽBY V ŘECKU  
A EVROPSKÉM PROSTŘEDÍ**

**Diplomová práce**

Mentor of Diploma thesis

Doc. RNDr. Jozef Kolář, CSc.

Hradec Králové 2015

Eleftheria Karageorgiou

## **STATEMENT**

I declare that this thesis is my original copyrighted work. All literature and other resources I used while processing are listed in the bibliography and properly cited. The thesis was not misused for obtaining the same or different academic degree.

Hradec Kralove, 14. 5. 2015

Eleftheria Karageorgiou

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## CONTENTS

<b>CONTENTS</b> .....	4
<b>ABBREVIATIONS</b> .....	6
<b>ABSTRACT</b> .....	8
<b>ABSTRACT CZECH</b> .....	10
<b>1. INTRODUCTION AND AIM OF DIPLOMA THESIS</b> .....	12
1.1 Paper Organization.....	12
<b>2. THEORETICAL ASSUMPTION</b> .....	13
2.1. Pharmaceutical Care as a Professional Practice.....	13
2.2. Aspects of Pharmaceutical Care.....	14
2.3. Philosophy of Pharmaceutical Care Practice.....	17
2.4. Understanding Managed Care.....	17
2.5 Defining Patient-Centeredness.....	18
2.6. Therapeutic Relationship.....	19
2.7. Components of Professional Practice.....	20
2.8. The Pharmacotherapy Workup.....	20
2.9. Medication Management Services.....	21
2.10. Definition and Comparability – The System of Health accounts.....	23
2.11. Health Expenditure by Function.....	23
2.12. Health Care Systems.....	25
2.13. Pharmaceutical Services.....	25
2.13.1 Cordoba Declaration.....	27
2.14. How Health Care is paid.....	30
2.15. Innovatives.....	32

<b>3. PRESENT SITUATION</b> .....	34
3.1. Pharmaceutical Sector undergoing Memorandum.....	35
<b>4. TECHNICALITIES – METHOD</b> .....	44
4.1. Escalating Participants .....	44
4.2. Method.....	45
4.3. Questionnaire.....	47
<b>5. RESULTS – COMMENTS</b> .....	51
<b>6. CONCLUSION – PROPOSALS</b> .....	54
<b>7. SUMMARY</b> .....	56
<b>8. REFERENCES</b> .....	58
<b>9. APPENDIX</b> .....	62

## **LIST OF ABBREVIATIONS**

<b>API</b>	Application Program Interface
<b>CPD</b>	Continuing Professional Development
<b>DRGs</b>	Diagnostic Related Groups
<b>ECJ</b>	European Court of Justice
<b>EOF</b>	Hellenic National Drug Organization (in gr.)
<b>EOPYY</b>	National Organization Providing Health Services (in gr.)
<b>ESDY</b>	Hellenic National School of Public Health (in gr.)
<b>ESPA</b>	National Strategic Reference Framework-European Projects (in gr.)
<b>ETESTA</b>	Company of Statistical Research and Analysis (in gr.)
<b>EU</b>	European Union
<b>FIK</b>	High Cost Medicines-Special Category of very expensive drugs (in gr.)
<b>FIP</b>	International Pharmaceutical Federation
<b>GDP</b>	Gross Domestic Product
<b>HDIKA</b>	State company for the electronic governance of social insurances (in gr.)
<b>HTA</b>	Health Technology Assessment
<b>IDEEAF</b>	Institute of Continual Education and Professional Development of Pharmacists (in gr.)
<b>IMF</b>	International Monetary Fund
<b>INN</b>	International Non-proprietary Name
<b>IRS</b>	Internal Revenue Service
<b>KEN</b>	DRGs (in gr.)
<b>KMES</b>	Centre of Controlling electronic prescription (in gr.)

<b>LSE</b>	London School of Economics
<b>LSP</b>	Large Scale Project
<b>MSSSI</b>	Ministry of Health, Social Services and Equality (in sp.)
<b>MR</b>	Medication Review
<b>MURs</b>	Medicines User Reviews
<b>OBIG</b>	Austrian Institute for Research and Development
<b>OECD</b>	Organization of Economic Co-operation and Development
<b>OTC</b>	Over The Counter
<b>PCNE</b>	Pharmaceutical Care Network Europe
<b>PFS</b>	Panhellenic Pharmaceutical Association (in gr.)
<b>PGEU</b>	Pharmaceutical Group of the European Union
<b>POM</b>	Prescription Only Medicines
<b>PPR</b>	Private Profit Remaining
<b>PSI</b>	Private Sector Involvement
<b>SHA</b>	System of Health Accounts
<b>SSF</b>	Social Security Funds
<b>TROIKA</b>	Ingroupment of representative from European Commission, International Monetary Fund and European Central Bank
<b>UK</b>	United Kingdom
<b>US</b>	United States
<b>USA</b>	United States of America
<b>WHO</b>	World Health Organization

## **ABSTRACT**

The political line of the health systems in EU is patients oriented and demands increased rates of training and well understanding of pharmaceutical services and pharmaceutical care, either in hospital pharmacies or in community pharmacies. Almost half of the annual pharmaceutical expenses accrued by the so called expensive drugs special category. Almost half of the annual turnover of community pharmacies is of the OTCs and the negative list of medicines. So examine the aspects of Continuing Professional Development (CPD) within deepened economic crisis in Greece in order to find professional solutions for the near future as well as by means of survival.

We deal with European surrounding and the present situation in basic education and continual training of community pharmacies in Greece taking into account the assumption that community pharmacies are part of the primary health care. We trace the real needs of well-trained community pharmacists to improve value for both the benefit of patients and the Health Care System.

It is the outcome of collaboration with the Institute for the Continual Training and CPD (IDEEAF) of PanHellenic Pharmaceutical Association which merely performs the unique thorough effort on the matter in Greece under the auspices and financing by pharmaceutical companies. The method of study includes a disseminated simple questionnaire to all those freely participating to IDEEAFs lessons.

The anonymous responds give a first impression and we can conclude in the following points.

- 1) The urgent dramatic changes – as main proposal – of the basic educational program within pharmacy faculties in Greece.
- 2) The direct collaboration of the PanHellenic Pharmaceutical Association (through IDEEAF) with international institutions specialized on social pharmacy.
- 3) The evaluation of pharmaceutical services by ETESTA the company of the PanHellenic Pharmaceutical Association for the research statistics and analysis of pharmaceuticals as basic pharmacoeconomic support.



- 4) The ongoing procedure of questionnaires in a second phase proposed by PGEU at a more centralized way.
- 5) The immediate establishment of an accreditation system certified by the PanHellenic Pharmaceutical Association.
- 6) A separate part of therapeutic categories of services for the emergency and/or the "heroic" drugs.
- 7) The necessary immediate legal and economic changes for the structure and net-working community pharmacists in order to respond on the demands of pharmaceutical care and pharmaceutical services.
- 8) Improving the role of community pharmacist and health care system by using pharmaceutical care and pharmaceutical services in essence is the one way to keep pharmaceutical profession independent and viable.
- 9) Especially for the Greek case, remains totally unsolved the economic problem for the health care system. The strictly limited budgets to redeem medicinals might be a challenge for pharmaceutical care and pharmaceutical services.

## ABSTRACT IN CZECH

Politická linie zdravotních systémů v EU je orientovaná na pacienty a vyžaduje rostoucí úroveň výchovy a správné pochopení farmaceutických služeb a lékárenské/farmaceutické péče v nemocničních i veřejných lékárnách. Téměř polovina ročních nákladů na léky připadá na takzvané drahé léčivé přípravky speciální kategorie. Téměř polovinu ročního obratu veřejných lékáren tvoří volně prodejné léčivé přípravky a léčivé přípravky negativního seznamu léčiv. A tak zkoumáme aspekty dalšího profesního rozvoje (Continuing Professional Development) během prohlubující se ekonomické krize v Řecku, abychom našli odborná řešení pro blízkou budoucnost.

Zabýváme se evropským prostředím a současnou situací v základním vzdělávání a další výchově veřejných lékáren v Řecku za předpokladu, že veřejné lékárny jsou součástí primární zdravotní péče. Zjišťujeme skutečné potřeby kvalitně proškolených lékárníků ve veřejných lékárnách s cílem dosáhnout prospěch jak pro pacienty, tak pro systém zdravotní péče.

Tato práce je výsledkem spolupráce s Institutem pro další vzdělávání a CPD (IDEEAF) Panhelénské asociace lékárníků, který jediný v této oblasti vyvíjí v Řecku značné úsilí pod patronátem a financováním farmaceutických společností.

Metodický přístup použitý ve studii zahrnuje distribuování jednoduchého dotazníku všem účastníkům dobrovolných školení pořádaných IDEEAF.

Anonymní odpovědi nám poskytují první představu, kterou můžeme shrnout do následujících bodů:

- 1) Naléhavé dramatické změny – jako hlavní návrh – základního vzdělávacího programu na řeckých farmaceutických fakultách.
- 2) Přímá spolupráce Panhelénské asociace lékárníků (prostřednictvím IDEEAF) s mezinárodními institucemi, které se specializují na sociální farmacii.
- 3) Vyhodnocení lékárenských služeb prostřednictvím ETESTA, společnosti Panhelénské asociace lékárníků, která jako základní farmakoekonomickou podporu provádí statistiky průzkumů a analýzu léčiv.
- 4) Další použití dotazníků v druhé fázi navržené PGEU a to více centralizovaným způsobem.
- 5) Okamžité zavedení akreditačního systému certifikovaného Panhelénskou asociací lékárníků.

- 6) Oddělenou část terapeutických kategorií služeb pro nouzové léčivé přípravky a\nebo takzvané “heroické léčivé přípravky”.
- 7) Bezprostředně nutné právní a ekonomické změny ve struktuře a propojení lékárníků ve veřejných lékárnách, aby odpovídaly požadavkům lékařské/farmaceutické péče a farmaceutických služeb.
- 8) Zlepšení role lékárníka ve veřejné lékárně a v systému zdravotní péče prostřednictvím lékařské/farmaceutické péče a farmaceutických služeb představuje v podstatě jediný způsob, jak lze udržet lékařskou profesi nezávislou a životaschopnou.
- 9) Především v případě Řecka zůstává naprosto nevyřešenou otázkou ekonomika systému zdravotní péče. Striktně omezené rozpočty pro splácení léčivých přípravků by mohly představovat výzvu pro lékařskou/farmaceutickou péči a farmaceutické služby.

## **1. INTRODUCTION AND AIM OF DIPLOMA THESIS**

The aim of this diploma thesis is to emphasize the necessity of vital and radical changes in the structure of pharmaceutical profession in Greece, which reflects to a different perception for the community pharmacies and their functioning within a new legal framework of patient-oriented health system.

In parallel, there is a great discussion all around EU and within PGEU over these issues and the present report shows the great difficulties faced by Greek pharmacists towards these changes.

Mainly mentioned are the circumstances under economic crisis and Memorandum situation as well as the presence understanding of community pharmacists for the necessity of this transformation. Major doubts seem to be sourcing by the lack of proper education and training. It is also examined the efforts of continual training so as this gap to be fulfilled.

In other words the following study is an attempt for thorough examination of pharmaceutical care and pharmaceutical services as basic components of patient-oriented health care system policies and pharmacoeconomics.

### **1.1. PAPER ORGANISATION**

To organize the pharmaceutical services by using pharmaceutical care needed primarily the codification of pharmaceutical legislation, examination of intervention points and absolute participation of pharmacists in first order health care. A lot of movements must be done in both education and other state-holders in the prescriptions' field in order to have an overall proposal as policy making.

The completion of this proposal needs firstly the brain storming from people with same targets which concludes in topics with categories of services in specific analysis and then it is possible to be distinguished the intervention grade, the level, the quality and the effectiveness as well as the checking way of sustainability of these applications.

So now we can speak about a LSP (Large Scale Project)

## **2. THEORETICAL ASSUMPTION**

### **2.1. PHARMACEUTICAL CARE AS A PROFESSIONAL PRACTICE**

**Definition:** Pharmaceutical care is a practice in which the practitioner takes responsibility for a patient's drug-related needs, and is held accountable for this commitment. In the course of this practice, responsible drug therapy is provided for the purpose of achieving positive patient outcomes. <sup>[19]</sup>

#### **Pharmaceutical care**

Pharmaceutical care is a philosophy of practice in which the patient is the primary beneficiary of the pharmacist's actions. Pharmaceutical care focuses the attitudes, behaviours, commitments, concerns, ethics, functions, knowledge, responsibilities and skills of the pharmacist on the provision of drug therapy with the goal of achieving definite therapeutic outcomes toward patient health and quality of life.

Although this definition focuses on drug therapy in the individual patient, the Group chose to expand the beneficiary of pharmaceutical care to the public as a whole and also to recognize the pharmacist as a health care provider who can actively participate in illness prevention and health promotion along with other members of the health care team. Thus, in this report, pharmacists' functions are divided into those related to individual patients and those related to the community. The Group considered pharmaceutical care to be an overarching practice philosophy to which all pharmacists should aspire. Bearing in mind the particular stages of development of healthcare delivery and pharmaceutical services in particular countries, pharmacists will need to use their professional discretion in setting priorities for the achievement of these objectives.

The Group recognized that the team approach is vital to achieve the optimum use of limited resources - both human and financial - in meeting healthcare needs in all countries. Thus, although the roles of pharmacists are considered in this report, the

Group recognized that pharmaceutical care is not provided in isolation from other health care services, but in collaboration with patients, physicians, nurses and other healthcare providers.

Where the pharmacist alone provides pharmaceutical care to a patient by initiating the therapy with a non-prescription drug or acts within a team on a prescribed therapy, the standards of the pharmacists activities should conform to national pharmacy standards based on the International Pharmaceutical Federation (FIP) Guide to Good Pharmacy Practice.

In certain countries, more patients are being treated with complex therapies in intermediate care facilities or in their homes. The reasons for this include an increase in the number of elderly in the population and the trend to shorten periods of hospital treatment. Consequently, the Group believes that pharmaceutical care provision will extend beyond the traditional pharmacy establishments and that pharmacists will have to collaborate with one another to ensure continuity of pharmaceutical care. [25]

## **2.2 ASPECTS OF PHARMACEUTICAL CARE**

The elements of pharmaceutical care for individual patients, taken together, describe comprehensive pharmaceutical care, the delivery of which requires an ongoing, covenantal relationship between the pharmacist and the patient. The pharmacist must use his clinical judgement to determine the level of pharmaceutical care that is needed for each patient. Examples of situations which call for comprehensive pharmaceutical care include:

- Patients who are particularly vulnerable to adverse effects because they are physiologically compromised (e.g. infants; the elderly; those with kidney, liver or respiratory failure)

- Patients with medical conditions that require ongoing evaluation and manipulation of drug therapy to achieve optimal results (e.g. diabetes mellitus; asthma; hypertension; congestive heart failure).

- Patients who are taking multiple medication thereby placing them at higher risk for complex drug-drug or drug-disease interactions and for drug-food interactions.

- Patients requiring therapy with drugs that can be extremely toxic, especially if they are dosed, administered or used improperly (e.g. cancer chemotherapeutic agents, anticoagulants, parenteral narcotics).

- Patients whose acute illnesses can become life threatening if the prescribed medications are ineffective or used improperly (e.g. certain infections, severe diarrhoea). [24]

### Pharmaceutical Care for Individual Patients

The following are the various actions that comprise the application of pharmaceutical care to individuals. If undertaken, in whole or in part, they will result in added value to drug therapy by making a positive contribution to the safe and cost effective use of drugs, leading to positive outcomes and improved health care.

- Obtain and maintain medication records and relevant health information, if they do not already exist. This information is essential to assess individualized drug therapy.

- Identify, evaluate and assess:

- 1) Drug related problems (side effects; drug interactions; improper drug use);
- 2) Symptoms described by patients;
- 3) Self-diagnosed conditions.

And decide whether pharmacist action is appropriate or collaboration with other health professionals is needed.

- Initiate or modify drug/non drug therapies by:

- 1) Independent action (drugs that can be provided by pharmacists without a prescription; non drug therapies, e.g. life style changes, medical devices); and
- 2) Collaborative action (always for medically prescribed drugs).

- Prepare and supply medication for use (including selection of drug products, prescription assessment, dispensing, compounding, packaging, labelling)

- With prescriber and/or patient, as the case may be. - set goals of therapy
- Design and implement pharmaceutical care plan (education, counselling)
- Monitor for therapeutic outcomes and take appropriate follow up actions (begin the pharmaceutical care cycle again). [24]

### Pharmaceutical Care for the Community

Pharmacists individually and as a profession have important roles to play in positively influencing drug policy, drug use and outcomes as well as other aspects of health care. In many instances this will be through collaboration with other health professionals at a community level.

- 1) Participate in the formulation of drug policy including drug regulation
- 2) Develop guidelines and criteria for formularies
- 3) Collaborate with other health care professionals to develop treatment guidelines
- 4) Design and monitor procurement and drug distribution systems, including storage and disposal (e.g. country wide, local, institutional)
- 5) Formulate and manufacture quality medications within pharmacy practice
- 6) Serve as a source of objective drug information: establish poison and drug information systems, e.g. poison and drug information centres
- 7) Initiate and undertake research in e.g. pharmacotherapeutics including clinical trials; pharmacoepidemiology; pharmacy practice; health economics; and evaluate and document the results of such research in order to improve all aspects of pharmaceutical care.
- 8) Educate all health professionals who participate in pharmaceutical care
- 9) Develop, evaluate and document pharmaceutical care practices
- 10) Participate in health screening (e.g. diabetes, cholesterol)
- 11) Participate in health promotion and education (e.g. the proper use of medication; smoking cessation; immunization; prevention of drug abuse; hygiene; family planning; AIDS prevention)
- 12) Develop professional standards and audit procedures



13) Establish and maintain an appropriately qualified pharmacy workforce. [24]

## **2.3 PHILOSOPHY OF PHARMACEUTICAL CARE PRACTICE**

The philosophy of practice specific to pharmaceutical care describes a purpose for the practice that is to meet the social need to manage drug-related morbidity and mortality with an explicit objective to care for a patient's drug-related needs by making it the practitioner's responsibility to ensure that all of a patient's drug therapy is appropriate, the most effective available, the safest possible, and is taken as indicated.

The philosophy of pharmaceutical care practice consists of 4 discrete elements, expressed as a commitment to 1) meet a social need with the practice, 2) fulfil specific responsibilities to achieve the goals of practice, 3) utilize patient-centred approach to meeting this need and 4) “care” for another through the development and maintenance of a therapeutic relationship.

This philosophy of practice allows patients and practitioners to know what to expect and through the philosophy of practice can the practitioner be held accountable for what he should do as well as what he actually does. This is why the philosophy of practice is so important in practice. We will now discuss each of the commitments involved in the philosophy of pharmaceutical care practice. [19]

## **2.4 UNDERSTANDING MANAGED CARE**

Managed care has many variations. It is often thought of as capitation (paying a fixed amount to provide health care for a specific group of people regardless of the number or cost of health care services provided), but this definition is incorrect. Any plan that systematically directs the provision of care can be called managed care. Managed care is used to provide better, more consistent care and to control costs.

Managed care organizations improve care by providing practitioners and institutions with guidelines for care, which reflect what the current best practices are. Practitioners and institutions are monitored to determine how well they are complying with the guidelines.

Managed care organizations control costs in several ways:

- 1) By encouraging and paying for recommended preventive measures.
- 2) By evaluating how well practitioners provide care and paying accordingly (pay for performance).
- 3) By developing cost-saving arrangements (e.g. by negotiating a lower rate of payment) with group of practitioners.
- 4) By paying a fixed amount for all people with certain diagnoses, thus giving doctors and hospitals a financial incentive to lower their costs and to treat people efficiently and rapidly.
- 5) By using capitation. <sup>[20]</sup>

## **2.5 DEFINING PATIENT-CENTEREDNESS**

The concept of patient-centeredness can be difficult idea to "get your arms around", which makes it hard to operationalize it in practice. Because it is a concept that reflects so many general "feelings" among other things, it is important to ask, "Where do I begin to ensure I practice in a patient-centred manner"?

Fortunately when you practice pharmaceutical care, you will always think in a specific, structured order. What you do for each patient has a clearly defined beginning, middle and end.

**THE ORDER OF THINKING, MAKING DECISIONS AND ACTING ALWAYS IS PATIENT FIRST, MEDICAL CONDITION (DIAGNOSIS) SECOND, AND MEDICATIONS THIRD.**

This may seem a bit counterintuitive because this practice is mostly about medications; however, in order to get the medications right, you must understand that the patient-specific context in which you are going to make your decisions is most important. This translates in practice, to understanding what your patient wants and needs before you address their medical conditions and medications. This is why a physician starts a patient interview with, "What can I do for you today?" Only after the physician understands what is most important to the patient - why the patient came to see the physician - does he begin to understand the medical problem at hand. This is true in pharmaceutical care practice also. This is a service so what the patient wants most important.

In order to understand what the patient wants and needs, it is necessary to understand how the patient thinks about his illness and his medications. What the patient think is usually different than what physician or the pharmacist thinks; in fact, they tend to be so different that we call the patient's perspective, the illness and the physician's perspective, the disease. We call the patient's perspective on medications, his medication experience whereas we call the pharmacist's perspective on medication, pharmacotherapeutics. So if we are going to practice in a truly patient-centred manner, then we will begin by understanding what our patient wants, what their concept of illness is, and perhaps most importantly in pharmaceutical care practice, what the patient's medication experience is. <sup>[19]</sup>

## 2.6 THERAPEUTIC RELATIONSHIP

The relationship that develops between the patient and the practitioner is termed *the therapeutic relationship*.

**Definition:** The therapeutic relationship is a partnership or alliance between the practitioner and the patient formed for the purpose of optimizing the patient's medication experience. <sup>[19]</sup>

## **2.7 COMPONENTS OF A PROFESSIONAL PRACTICE**

It might be helpful at this point to review the difference between practice and service; in this case, pharmaceutical care practice from medication management services. Pharmaceutical care practice is the specific application of scientific knowledge and clinical experience to the needs of a patient in a very specific manner to achieve a very specific end. When these individual, patient-specific activities are organized and integrated into the health care system and a delivery system is developed, which allows the practitioner to "practice" his profession repeatedly, on a daily basis, complete with an appointment process, defined care process, the reimbursement system, and everything else needed to "practice" then a service is being provided. So what is seen from the practitioner's perspective in his practice, what is seen from the patient's side, is the service being delivered.

All patient care practices consist of 3 components:

- 1) The philosophy of practice, which is the ethical foundation for the practice and prescribes appropriate professional behaviour;
- 2) The patient care process, which organizes the knowledge and decisions that need to be made and the actions that need to be taken; and
- 3) The practice management system, which allows the services to be delivered in an organization structure that assures quality, accountability and payment in order to sustain the long-term viability of the practice. <sup>[19]</sup>

## **2.8 THE PHARMACOTHERAPY WORKUP**

All patient care practitioners; be they physicians, nurses, dentists, of pharmaceutical care practitioners, need a structured, rational thought process for making clinical decisions. What makes a practitioner qualified to do his or her work is the application of a unique knowledge base and set of clinical skills using a systematic thought process to assess the needs of a patient, identify and resolve problems, and prevent problems from occurring. In the case of the pharmaceutical care practitioner, this unique knowledge base is focused on the pharmacology,

pharmacotherapy and pharmaceutical care practice, in which the practitioner identifies, resolves and prevents drug therapy problems. The systematic thought process used in this practice is the Pharmacotherapy Workup.

DEFINITION: The Pharmacotherapy Workup is a rational decision-making process used in pharmaceutical care practice to identify, resolve and prevent drug therapy problems, establish goals to therapy, select interventions and evaluate outcomes. It is a description of the thought processes, hypotheses, decisions, and patient problems that occur during practice.

The Pharmacotherapy Workup is the cognitive work occurring in the mind of the practitioner while caring for the patient. In contrast, the patient care process, is what the patient experiences when he or she receives pharmaceutical care. This process is a series of interactions between patient and pharmaceutical care practitioner. The patient care process is where the practitioner's unique knowledge and clinical skills are applied to solve health care problems for patients. [19]

The information required to make clinical decisions with your patient includes *patient data* (demographic information, medication experience) *disease data* (current medical conditions, medical history, nutritional status, review of systems) *and drug data* (current medications, past medication use, social drug use, immunizations, allergies and alerts). [19]

## **2.9 MEDICATION MANAGEMENT SERVICES**

Medication management services are relatively new to those in and out of the health care professions. The first use of the term on a broad scale in the USA was in 2006 when the Federal Government implemented a new drug benefit (Part D) within the federal insurance program of Medicare, which now includes a drug benefit for the elderly population. As a part of this benefit a new service was required to help patients to manage these "covered" medications and this new service was called medication therapy management. This phrase was taken from terminology used in the British Health System where it referred to managing treatment options and was called

therapy management. When the term was imported to the US and applied to the management of medications taken by the beneficiaries of the Medicare program, it became medication therapy management.

A clear definition of the term medication therapy management did not accompany the introduction of the benefit to the elderly. This may explain why so many different definitions of the concept have arisen, each with a slightly different emphasis, depending on the organization defining the term. However, generally speaking, there are two different approaches being taken to medication therapy management: 1) the prescription-focused approach and

2) the patient-centred approach.

**DEFINITION:** Medication management services are the professional activities needed to meet the standard of care which ensures each patient's medications (whether they are prescription, non-prescription, alternative traditional, vitamins or nutritional supplements) are individually assessed to determine that each medication is appropriate for the medical condition being treated, that the medication is being effective and achieving the goals established, that the medication is safe for the patient in the presence of the co-morbidities and other medications the may be taking, and the patient is able and willing to take the medications as intended. This assessment is completed in a systemic and comprehensive manner.

In addition to the comprehensive assessment of the patient's drug-related needs, medication management services include an individualized care plan that utilizes the patient's medication experience and preferences to determine desired goals of therapy with the patient, as well as appropriate follow-up to evaluate actual patient outcomes that result from the care plan. This all occurs because the patient understands, agrees with, and actively participates in the treatment regimen, thus optimizing each patient's medication experience and clinical outcomes. Medication management services must be delivered and documented in a manner that adds unique value to the care of the patient and integrates easily with the medical team caring for the patient. <sup>[19]</sup>

In management of medication services anamnestic data (family history, medication history, and patient's history) play one of the most important roles.

Knowing of historic data helps in minimisation of risks, maximisation of effect as well as rational use and choice of drugs. Moreover, analysis of anonymised historic data could give an exact impression about behavioural aspects (of medical doctors, patients, pharmacists) of therapeutics. [6]

The interventions must be grounded in the philosophy and ethics of the professional practice of pharmaceutical care and delivered according to the standards of practice for the patient care process prescribed by the practice. [19]

## **2.10 DEFINITION AND COMPARABILITY**

### **THE SYSTEM OF HEALTH ACCOUNTS**

They are defined the boundaries of the health care system. Current health expenditure comprises personal health care (curative care, rehabilitative care, long-term care, ancillary services and medical goods) and collective services (prevention and public health services as well as health administration). Curative, rehabilitative and long-term care can also be classified by mode of production (inpatient, day care, outpatient and home care). Concerning long-term care, only the health aspect is normally reported as health expenditure, although it is difficult in certain countries to separate out clearly the health and social aspects of long-term care. Some countries with comprehensive long-term care packages focusing on social care might be ranked surprisingly low based on SHA data because of the exclusion of their social care. Thus, estimations of long-term care expenditure are one of the main factors limiting comparability across countries. [7]

## **2.11 HEALTH EXPENDITURE BY FUNCTION**

Spending on inpatient care and outpatient care covers the major part of health expenditure across EU member states – almost two-thirds of current health expenditure on average in 2012. A further quarter of overall health spending was

allocated to medical goods (mainly pharmaceuticals), while 10% went towards long-term care and the remaining 6% to collective services, including public health and prevention services and administration.

Greece stands out as the European country with the highest share of spending on inpatient care (including day care in hospitals): it accounted for almost half of total health spending in 2012, a significant increase from 2011 as a consequence of a larger decrease in spending on outpatient care and pharmaceuticals.

The economic crisis affected health spending growth in many EU countries, resulting in substantially lower spending growth since 2009. In order to curb public spending, governments introduced a number of measures, such as cuts in health sector workforce and salaries, reductions in the fees paid to health providers and the prices for pharmaceuticals, and increases in co-payments for patients (Morgan and Astolfi, 2013).

The resulting slowdown in health expenditure experienced in many European countries affected all health spending categories to varying degrees. Both inpatient and outpatient care saw average spending growth decrease significantly, especially from 2010 onwards, in contrast to the high growth rates seen prior to the economic crisis. Pharmaceutical spending has continued to shrink, on average, for the last three years from 2010 to 2012, mainly due to government price reduction policies. Many countries also took early measures to reduce or postpone spending on prevention and public health services, with a slight recovery in spending observed since 2011. The strong increase in 2009 is due partially to the H1N1 influenza pandemic which led to significant one-off expenditures for the purchase of large stocks of vaccines in many countries. Administration was another category immediately targeted in cost-cutting efforts. Cuts in administrative budgets were an initial response to the financial crisis in many countries, such as in the Czech Republic, where the budget of the Ministry of Health was reduced by 30% between 2008 and 2010. Across all EU member states, administrative expenditure stagnated in 2010 and 2011 before growing again in 2012.

[7]



## 2.12 HEALTH CARE SYSTEMS

Pharmaceutical Care and Pharmaceutical services are merely part of the dynamic character of health care systems especially needed to be patient-oriented as general policy where value for money of all medicinal should be proved in everyday practice.

### DYNAMIC CHARACTER OF HEALTH SYSTEM

<u>BASIC STRUCTURE</u>	<u>AIM</u>	<u>TARGETS</u>
Finances	Justice-Fairness	Health
Organising Structure	Choice	Economy Production of People
Money Distribution	Productivity	Citizens Satisfaction
Services Supply	Efficacy	

Health Systems are not isolated and their multifunctional characters are strongly influenced by different external factors. To mention some: the demographic problem, the accelerated development of high tech systems, the coexistence of many chronic and not contagious diseases, the changes in lifestyle, the continually increasing expenses, unemployment, people's expectations which create new demands, circumstances and terms where health systems need the greatest flexibility to be adjustable in order to succeed their targets. <sup>[8]</sup>

## 2.13 PHARMACEUTICAL SERVICES

Community pharmacy is a part of the organising structure of the health system. In particular is a part of the primary health care. In turn, community pharmacy should be adjustable to the demands mentioned above. Besides community pharmacy is the most accessible point of primary health care. Respond of the pharmacy profession to these demands is the configuration of pharmaceutical services in order to get the major control over the efficacy of pharmaceutical treatments and

the minimisation of the risks, the unwanted effects of medicines as well as over compliance and adherence of patients.

According to PGEU (Annual Report 2010) pharmaceutical services are listed in three groups:

1) Necessary and mandatory services (prescriptions, recycling of medicines, address to the physician for more serious cases, records of unwanted effects and quality problems of medicines).

2) Advanced services (Medication Reviews (MR), patient's compliance and coherence, first aids). This comes in chain with continual education and training and the relative accreditations.

**MEDICATION REVIEW DEFINITION:** Medication review is an evaluation of a patient's medicines with the aim of optimising the outcomes of medicine therapy. This entails identifying the risks, detecting medication-related problems and suggesting solutions. Medication review should be part of the management of medication therapy.

PCNE (Pharmaceutical Care Network Europe) recognises three basic types of medication review. The three PCNE types of medication review assume that all dispensing information for all medicines that a patient takes (receives)/has taken (received) in the recent past is available to the pharmacists.

#### **TYPES OF MEDICATION REVIEW:**

**TYPE 1: Simple MR:** A simple medication review is based on the available medication history in the pharmacy.

Reveals: drug interactions, some side-effects, unusual dosages and adherence issues.

**TYPE 2: Intermediate MR:** An intermediate medication review can be performed when the patient can be approached for information. Such a review is based on medication history and patient information.

Reveals: drug interactions, some side-effects, unusual dosages, adherence issues, drug-food interactions, effectiveness issues, side effects, and problems with OTC.

TYPE 3: Advanced MR: An advanced medication review is based on medication history, patient information and clinical information.

Reveals: drug interactions, some side-effects, unusual dosages adherence issues, drug-food interactions, effectiveness issues, side effects, problems with OTC, indication without a drug and drugs without indication, dosage issues.

3) Specialised services (Surveillance of effectiveness of pharmaceutical treatments in patients with chronic diseases, promotion public health services e.g. smoking sensation, weight control, preventive medicine tactics). [8]

To this purpose it is crucial to make a reference to CORDOBA DECLARATION of the Spanish Pharmaceutical Association (Consejo General de Colegios Oficiales de Farmaceuticos Espana). [5]

### **2.13.1 CORDOBA DECLARATION**

#### **A Community Pharmacy: Working for a New Patient, in a New Healthcare System**

Community Pharmacy wishes to be aligned with and participate in the process of profound change that Spanish society and its Health System is undergoing. Therefore, in January of 2012 the General Pharmaceutical Council of Spain organized the meeting "Professional and Sustainable Pharmacy", evidencing Community Pharmacy's commitment to patient care and the Health System.

Since then a wide-ranging work plan has been launched, taking into account chronicity, ageing, the reorganization of health systems, and budgetary constraints. This is a scenario characterized by the coordination between social and healthcare services, the integration of care levels, teamwork, domiciliary care, improved Public Health, e-Health, and pharmacotherapy innovations.

During this time, initiatives have been carried out with the Ministry of Health, Social Services and Equality (MSSSI), coordination sessions with the Professional Pharmaceutical Organization and universities, research studies, the development of Best Practices in Community Pharmacy, and enhanced relationships with patient associations.

The work performed has garnered recognition by Community Pharmacy and by pharmacists, in both the Framework Agreement subscribed with the MSSSI (November 6<sup>th</sup>, 2013) and its Technical Development Proposal (July 3<sup>rd</sup>, 2014), as well as in parliamentary initiatives in the Congress (May 12<sup>th</sup>, 2014), the Senate (May 7<sup>th</sup>, 2014) and Spain's regional parliaments.

In this process the General Council organized a convention (March - July 2014) structured in four seminars, in which representatives from the Professional Pharmaceutical Organization, scientific societies and international and national experts discussed the future of Community Pharmacy in Spain.

This is a future in which, in addition to Dispensing Services, new Professional Pharmaceutical Services must be considered and promoted that improve the responsible use of medicines and medical devices while promoting patients' health.

These are Services whose implementation calls for a Community Pharmacy that continues to offer the population quality care, proximity, professional independence and effective equality in access to medicine and to Professional Pharmaceutical Services. [5]

In light of all the aforesaid, the Pharmaceutical Profession hereby DECLARES its commitment to:

1. Advancing Community Pharmacy's active participation with the MSSSI and the Regional Health Departments in the National Health System reform process so as to yield a renewed, professional and sustainable Pharmacy.

2. Promoting the integration of Community Pharmacy and the involvement of the pharmacist in the plans and strategies of the MSSSI and the Regional Health Departments, engaging them in the promotion of health, disease prevention, and the Medicines Review with Follow up Service.
3. Developing a patient clinical care that can be administered by the Community Pharmacy in the field of social-healthcare services, with regards to both domiciliary pharmaceutical care and pharmaceutical care in social-healthcare facilities.
4. Participating in e-Health, facilitating community pharmacists' necessary access to patients' pharmacotherapeutic history with the record of the intervention performed, in pursuit of an interoperable system that fosters communications between professionals; and promoting quality in the dispensing of self-care medicines over the Internet through pharmacies.
5. Underscoring the strategic value of medicines – both prescription and OTC – and its dispensing by the Community Pharmacy to ensure its quality and accessibility by the population, including innovative medicines (biological medicines, biosimilars, etc.) which, due to their characteristics, are adequate for outpatient use.
6. Advocating before the administration for the need for healthcare planning with regards to the network of community pharmacies, applying criteria of economic viability, ownership/licensing by the pharmacist, and professional compensation that assures a quality Community Pharmacy for citizens, whether rural or urban.
7. Promoting pharmacists' Continuous Professional Development and, in addition, supporting universities so that the contents of degree programmes include and reflect clinical care practices adapted to the new needs of patients as regards medicines and medical devices.
8. Encouraging research into Community Pharmacy's care processes and working towards Professional Pharmaceutical Services that are patient-centered and in accordance with pharmacists' competences, compliant with standards of quality and Good Practices, remunerated, legally provided for, and which may be voluntarily rendered by all community pharmacies.

9. Promoting greater coordination between community pharmacists and colleagues in hospitals and primary care facilities, as well as collaborative practice with other healthcare professionals, fostering teamwork and favoring the continuity of care for patients.
10. Seeking to secure institutional and political support, as well as strategic alliances with other organizations, associations, scientific societies and universities to advance the development of these working lines. <sup>[5]</sup>

## **2.14 HOW HEALTH CARE IS PAID**

Health care, particularly hospitalization, advanced technologies and complicated treatments is so expensive that most people cannot afford to pay for it by themselves. Total health care costs annually in the U.S. were about \$ 1.9 trillion in 2004 and the cost of providing high-quality (not even the best quality) health care to everyone in U.S. would be very much higher. Consequently, the cost of health care is usually shared by some combination of the person who is receiving care, employers, health insurance providers (including managed care organizations and private insurance companies), and the government.

Many people who are employed full-time (and often their family members) receive health insurance through their employer as an employee benefit. Many employers require employees to contribute some of the cost of the coverage through salary deductions. Such contributions may enable employers to offer plans with a range of benefits depending on how much the employee choose to pay. Plans with more comprehensive coverage have higher employee costs, sometimes amounting to several thousand dollars per year. Other people purchase insurance privately. However, private insurance may be very expensive or unavailable, particularly for people who have pre-existing disorders or risk factors for certain disorders. Also, it may not cover certain disorders. If people are eligible for government aid because they have limited financial means, are disabled, or are older than 65, health care costs may be covered by plans such as Medicare and Medicaid.

Whatever the sources of health care coverage, most people have to pay some part of the cost themselves (called out-of-pockets costs). Typically, there are 3 sources of out-of-pocket costs:

1) DEDUCTIBLES: A certain amount of the initial cost is paid by the person before insurance plan pays any benefit. A deductible may have to be paid only once during a given time (usually yearly) or each time certain services are provided.

2) COPAYMENTS: Part of the cost of each service provided is usually paid by the person. A co-payment may be a fixed amount or a percentage of the cost.

3) COSTS THAT EXCEED THOSE COVERED BY A PLAN: Plans may limit what they will pay for a given service (called allowed amount). If a practitioner charges more than this limit, the person must pay it. Sometimes the limit is based on what the plan defines as usual, customary and reasonable for a given service. Sometimes plans set a relatively low limit (which means people are likely to pay extra charges). However, people often pay extra charges only if the service is provided by a practitioner outside the plan's network because practitioners in the network have agreed not to charge more than the plan allows them to. Thus, people can usually avoid the extra charges by using practitioners in the network.

Traditionally, most people had access to some type of plan. However, health care costs have been increasing much faster than the rate of inflation and are expected to continue to increase rapidly, partly because the population is aging and partly because advanced tests and treatments are increasingly available. As a result, many employers have eliminated or reduced health care insurance for their employees or retirees, and private insurance has become more expensive and difficult to qualify for. Thus, increasing numbers of people do not have insurance from their employer, cannot obtain or afford private insurance, and are not eligible for government coverage. In 2004 about 16% of the U.S. population was without health care insurance. Ironically, people without health care plans may be charged much more for services than people with plans because plans have bargaining power to negotiate low rates for their members. <sup>[20]</sup>

There are two options in Europe expressed as political lines in pricing pharmaceutical services. The one which is the German System of pricing medicines, sees the same amount of 8€ for all services of any type following all therapeutic

categories always the same whatever the total amount of prescription is and being independent of the significant of the pharmaceutical service which accompany the medicines of the prescription. <sup>[3], [4]</sup> The other option mainly conducted by the British NHS (National Health System) relies on medical reviews and pharmacists should be aware of MURs (Medicines User Reviews) which are published by NHS in order pharmaceutical services to be paid. <sup>[1]</sup>

In Greece and in other European countries pharmaceutical services payments are part of the remuneration systems of medicines and through a complexity of defining profit margin for the benefit of the pharmacists, never appear as a separate and thorough function of the community pharmacists' everyday practice. <sup>[18]</sup>

Co-payments are another problematic case and great differentiation between member states of E.U. Nowadays there is an info flow among health care systems in order to bring balances between economics and satisfaction of the people.

## **2.15 INNOVATIVES**

Dealing with pharmaceutical care and pharmaceutical services means in one great part of them to have the most thorough and perpetual continual education over innovatives. Consequently to have the proper preparation to manage personalised therapies in patient-oriented health care systems. The penetration of generics, the rational use of drugs which is the point where pharmaceutical industry meets the Ministry of Health concerning the “the classic” treatments and therapeutics is the way to the entrance into treatments with pharmacogenomics, nanotech applications, etc. with totally new aspects of keeping quality and safety of medicines. This is not a feature for the near future since about the half of the annual turn round of all medicines in Greece are mainly patented innovatives classified by the Ministry of Health as special category of very expensive drugs. Only a very small percentage (almost 3%) of them allowed to be distributed through community pharmacies. <sup>[15]</sup>

To keep an antagonistic base at the international field pharma-industries are strongly aware of the specialisation needed for their innovative drugs. In the name of safety and managing the expensive new therapies they are ready to prepare their own experts to handle them, if pharmacists do not approve their value in this part of their



role in the pharmaceutical care. However pharma-industry pays a lot to prepare community pharmacists as experts. In a way, this assumption explains how and why a lot of courses of IDEEAF undergo finances by big pharmaceutical companies.

From their point of view, big pharma-companies consider whole amount of pharmaceutical expenditure to be transferred from State and Social Insurances to their own, in the name of development and keeping high rates of Research and Development. This amount is being transferred by means of necessary presence of community pharmacies. Dealing with pharmaceutical services means that only a small percentage of PPR (Profit margin over retail price) belongs to the medicine-product. The other payable profit for the community pharmacists, to secure safety and compliance, comes from the certain ways to materialise pharmaceutical services as a product. In other words pharmacies in the patient-centered health care systems skipping out the supply chain for the purpose of their profits. Quality of pharmaceutical services and the accreditation followed is the main demand. It is about a new era for the community pharmacists. <sup>[15]</sup>

Not to mention the near future changes in hospitals, in medical doctors' education, in community pharmacists education for innovatives (there is basic education within three pharmacy schools in Greece but not continual education). It is questionable which is the community pharmacy (space, standards, laboratory) which serves the best development of pharmaceutical care and pharmaceutical services. PGEU in a first attempt showed the way of Blueprint of pharmacy.

[Patient-Centred Health Care System] → [Safety of Medications] → [Pharmaceutical Care – Pharmaceutical Services] → [Blueprint of Community Pharmacy] → [Accredited Services, Accredited Laboratory] → [Accredited Training, Continual Professional Development]. <sup>[10]</sup>

A good knowledge of the innovatives is also part of understanding even health high tech assessment (HTA). Obviously this type of community pharmacy is not the one over populated in Greece where one community pharmacist runs everything in the community pharmacy of his/her own. <sup>[12]</sup>

### 3. PRESENT SITUATION

- 1) The education program does not include Clinical Pharmacy and Pharmaceutical Care but only fragmentary as these can be taught within Pharmaceutical Chemistry and Pharmacology.
- 2) The State in the last law making excluded the pharmacies from first order health care despite the opposite suggestions of Task Force. <sup>[16]</sup>
- 3) The state company HDIKA which is responsible for electronic prescriptions excludes the pharmacies from drawing e-data/e-card of patients.
- 4) The State refuses the identification of e-signature of pharmacists from PFS (Pan-Hellenic Pharmaceutical Association) but all pharmacists have accepted by the Ministry of Public Education to be professionals with recognized qualifications.
- 5) The training in innovation, search and technology is promoted mainly by interested producers who avoid the existence of today's pharmacist, because still the Hellenic State refers the great number of innovated drugs to be distributed through state pharmacies or even through hospital pharmacies. To this purpose was proclaimed the big number of innovatives as a special category of very expensive drugs. <sup>[15]</sup>
- 6) So far, the cross border relationship is imposed by State through HDIKA in absence of pharmacists. It seems that in a way the State will demand all applications of cross border directive from pharmacists through a pre-prepared electronic system fitting the best to HDIKA purposes. Mainly in a purpose to collect retail data of pharmacies. Not to exclude the commercial exploitation of them and not to exclude questioning over data safety.
- 7) Ministry of Health announced the creation and all applications of e-health card mainly under the pressure of the European institutions since Greece still undergo Memorandum terms. During the annual Congress of National Supreme School of Public Health (ESDY) technicians of HDIKA presented a model of e-health card. A short of pharmaceutical record was included, the e-health card program technically, is promoted by the Scientific Association of Medical Doctors from Athens and the pharmaceutical records excluded totally the presence of community pharmacists and their interventions. So far,

HDIKA considers data collections by e-prescriptions as being pharmaceutical records. There is reference only for POM. [2]

“If the services pharmacy of the European Professional Future is the vision, we serve, we have to begin our changes NOW!” This is the main anxiety in the Pan-Hellenic Pharmaceutical Association expressed during the convention of pharmacists named Hellas Pharm in Athens on 21/3/2015. [11]

The political change under the continual pressure of economic institutions from Europe and IMF (DNT) creates an enigma of how the administration moves forward rapidly to join other European countries or to remain stand by. The Pan-Hellenic Pharmaceutical Association has activated firmly two mechanisms in order to fulfil a complete legal proposal including Pharmaceutical Care, Pharmaceutical Services and Patients-Oriented policies at the economic and effectiveness level. These two mechanisms are consisted of two organs established and financed by the PFS, both have the legal form of a company totally owned by the PFS. The one named Institute For the Continual Education and Professional Development of community Pharmacists (IDEEAF) and the other is an organ for the collection, processing, metrics, research and analysis of pharmacies anonymised data (ETESTA) which is based over the outcome of the directive for the counterfeit medicines ”retail data produced in the community pharmacy belong to the community pharmacist”.

The one organ relies on the other confidentiality and credibility and both synergistically are preparing the general plan needed by the PFS.

### **3.1 PHARMACEUTICAL SECTOR UNDERGOING MEMORANDUM**

In front of us it is under deployment and unprecedented in extent and intense experiment of social engineering which alters the basic characteristics of the Hellenic social shape in the excuse of economic control ongoing with the specification of the least reaction from health professionals. Never again in modern times appeared such a media propaganda which turned at first society against pharmacists and medical

doctors against pharmacists by chance of e-prescription writing by INN. <sup>[14], [17]</sup> Today these phenomena have been blunted. Not only because the many measures became applied laws but mainly because people do not believe in propaganda any more. They managed to incriminate all citizens as a whole.

1) The first minister of health under Memorandum was Mr Loverdos who claimed to be academician of the constitutional Right. Secretary general of the ministry of health at the same period (2010-2012) responsible for the pharmaceuticals was Mr Demopoulos, dentist. Greece had 10.500 community pharmacies. Mr Loverdos in agreement with Troika considered this number should have increased instead of merging them, for reasons of public health protection. Ignored all reactions even coming from Mr Mossialos, LSE professor, increased number of community pharmacies up to 12.000 units. This number is the greatest one within EU in proportion with Greek population. It is about the most dense network of pharmacies with finest disperse all around Greece. These units are of very small economic size and they function at the edge of viability. Mr Loverdos by his Act allowed efforts to over through micro proprietors character of retail pharmaceutical economy. Since all other measures taken afterwards were exactly of the most suffocating type due to the enforced cuts on the pharmaceutical expenses.

We believe – looking at the present economic icon of community pharmacies – there was a general plan to convert community pharmacies into a field of cheap opportunities for great capital's insertion. Today, 2.200 community pharmacies have transferred their rights to their suppliers, 550 transferred their rights to the state (IRS-tax centres), 280 transferred their rights to EOPYY and the 33% of the whole undergo survival under the break even waiting the sudden operational death.

ECJ, European Directives adopted to Hellenic national law except ownership of community pharmacies from private interest and defend pharmaceutical profession adequately creating a strong legal barrier in order to avoid risks for public health. This is not enough talking in economic terms. By his law Mr Loverdos smashed even from the point of pharmaceuticals social state and did not enforced it as he primarily advertised it. Very soon was shown that the problematic accessibility of the citizens to the health services was not aught to the number of pharmacies. The great shortages of medicines followed measures and still existing at 36% of the pharmaceutical market are not of the many pharmacies cause.

2) Minister of labour and social security funds at the time of the first Memorandum was Mr Koutroumanis, former under salary syndicalistic member of one of the funds he was supervisor Minister. In the same ministry, responsible secretary general for all health branches of the social security funds was Ms Dretta, dentist. Ministry of labour aided strongly Ministry of health to establish the new organ unifying all health branches of social security named EOPYY. Ms Dretta also facilitated the creation of a primitive system of e-prescription mainly based on the collaboration of PFS and community pharmacists.

EOPYY created in completed and still functions full of vacant and legally doubted points. This happened because the separate security funds were reluctant to follow unification in order to avoid loss of bureaucratic privileges of their staff. It is not far away banking involvement. Banks showed fears of losing fund's deposits at the time of recapitalization bureaucratic procedures together with banking hesitations and supported by perverted structure of EOPYY resulted in debts towards suppliers of 6 months and one year time. After massive reactions of community pharmacies the debt narrowed time at 4 months and today comes up approximately 3 months. In numbers the debt was more than 550m. Old debts of SS funds before unification from October 2011 still remain unpaid.

Troika found all blind points and black holes in EOPYY. They counted and they well described them in their reports but no move of old debt was presented. No move to push EOPYY pay properly within 2 months European time ever happened. Either to aid banks keep money or blackmail politically government over surplice of the state, Troika kept silence.

3) Soon after EOPYY's establishment published report by the union of Hellenic Banks considering 'all community pharmacies precarious and completely unsafe clients'. Justified their decision from the event the great part of pharmacies work was engaged with the state (EOPYY). Second these report community pharmacies staid apart from liquidity coming from European money (ESPA) intended for their operational continuity. This ESPA money is frozen within banks and today is counted in their recapitalization. Namely banks retain pharmacies money of EOPYY's debt and at the same time characterize them unsafe clients and deny financing them properly. The situation is ongoing.

4) In order to motivate mechanism of paying old debts, Mr Koutroumanis demanded a discount of 3.5% from pharmacists. He went outlaw of the directive 7/11 which orders clear debts within 2 months otherwise a legal interest is counted. This directive has been an embodied to the Hellenic national right and Troika remained silent.

5a) Ms Dretta organized the department of HDIKA (new state organ for the databank of e-prescription). Over sensitive pharmaceutical data as well as over sensitive commercial retail data of pharmacies Ms Dretta showed apathy concerning the legal framework of Greece and the data safety regulation of EU. Terms of the first Memorandum were introduced and easily accepted by Troika imposing an arbitrary way of obligatory collecting data and not guarantying their safety. This low level data control produced rumours for the underground sales of data. Enforced to get real numbers of the retail consumption of medicines and a severe declining of the public pharmaceutical expenditure the system of e-prescription pushed to function in completed though, at very short time. Also API pushed integrators supplying technicalities in pharmacies to cover this necessity for free. It is questionable the great interest of Troika not influencing public economics (OTC, cosmetics, medicines of the negative list). Maybe they were preparing the next step of the Memorandum towards OECD study even at points out of the European jurisprudence.

5b) Another electronic system coming from a separate public organ named KMES as responsible for the sharing debts and bills from EOPYY to pharmacies. KMES assigned this work to the Unisystem private company. Unisystem also controls the integrity of all electronic prescriptions. By law pharmacist forced to pay the costs of Unisystem otherwise they will not be paid by EOPYY. Safety of sensitive data in KMES is also questionable.

6) Pricing of medicines (years 2010-2012) preferred to be a flat devaluation. This type of pricing saved the mechanism resulted in expensive generics and avoided antagonism. This mechanism is not standing any longer. Continuous flat devaluation of medicines made pharmacies lose 65% of their annual turnover in 2 years' time. At the same period pharma industry lost 33% of their annual turnover but they manage not to decrease their net profits.

Based on the excuse of not exceeding public pharmaceutical expenditure the state kept on working through state pharmacies of EOPYY. Through them the state distributes the special category of very expensive drugs (not necessarily all of them extremely expensive). The way of pricing this category of drugs supports strongly the state monopoly and inhibits community pharmacies to share at equal terms their distribution to the people. This peculiar perception of state expansion in a liberal Europe brought people patients lining outside EOPYY's pharmacies waiting for their dose (mainly anticancer agents) and created great shortages of these drugs since the state cannot afford money to pay for.

Economic reasons justify the dramatic delays on licensing new and innovative medicines (delays of 3 years). National drug organization (EOF) claimed not been properly stuffed for the necessary quality controls of medicines. Not to ignore the influences from the side of multinationals, this situation seems getting better under the pressure of greater percentages of generics in the prescription.

From 2009 to 2012 parallel trade decreased to 1/3 from 2013 serialization central system was installed and now parallel trade is not the first cause of shortages. Flat devaluation of medicines gave Hellenic State the great excuse that something has been decreased in prices following terms of the Memorandum. Neither food nor energy or retail commerce followed. Today Greece has the most expensive supermarkets comparatively in EU.

7) Concerning the efficiency of the Memorandum terms, we see the greatest problem coming from the imposition of stable predicted annual budget ceilings in pharmaceutical expenditure. The ceiling budget for 2014 should be the one per cent of GDP just as in Portugal and Belgium because populations are about similar. No studies of the real needs or epidemiological data or other pharmacoeconomics were considered to be necessary. Fitted to the whole programme of saving money Troika easily agreed.

Ageing people, influences by the surrounding and feeding, influences of the labour surrounding, physiological and social aspects of unemployment and hospitalization, behavioural changes of doctors and pharmacies towards medications and treatment, compliance of patients, purchasing power, variety and mixing of differently educated people, carriers of different civilizations and different social

behaviours (Greece hosts more than one million economic immigrants) totally ignored.

Defective data were the basis of furious scheduling of measures in purpose of correcting numbers greatly. The first plan of measures transforming health sector presented in front of Troika in November 2011 by the pensioner Professor of statistics (School of public health – ESDY) Mr Sisoura and his associates as being the unique and absolute tool that Mr Loverdos should have done law urgently. The plan became law in December 2011 well fitted to the first Memorandum. Data coming from e-prescription should follow the targets named by this plan. It was the first time in our history, so great number of measures transforming health sector demanded to be applied in so short time. Evidently there were blanks in accessibility of people. Especially those people hospitalized and long term unemployed and so totally uncovered. International institutes observed this stunning experiment. Troika did not react although they easily discovered that this plan created more recession and unemployment in the health sector where never before had numbers of unemployment. Not to mention again the suspicious democratic way the plan became law. MPS claimed they had no time to read it and they did not know what they were obliged to vote. They had confidence over the salvation of Greece.

The great argument was that Greece presented extremely high pharmaceutical expenditure in 2009 above all MS of EU. They used to forget that the pricing of medicines were to favorize pharmaceutical companies and the amount of 1,4b of parallel trade was included into the 5,4b of the whole of the pharmaceutical expenditure. Besides this expenditure was less than 20% of the total health expenditure. Afterwards, for a long time even within Troika members remained the question why Hellenic Government insisted in having cuts over this 20% and not on the rest. Other health sectors transformations have been delayed for 2 years.

The 1,5m unemployed people many of them with no security cover and the results of 6 years high rates of recession motivated the establishment of 30 social pharmacies and corresponded social surgeries throughout Greece. Mainly by the solidarity efforts of pharmacists, doctors, Orthodox Church and Charity organizations. Social pharmacies cover even hospital necessities because ceiling budgets avoid proper supplies. Drugs about to expire or already used are the great staff of these social pharmacies.



From 2010 4.000 people committed suicides many of them because of accessibility problems to health services. Recent OECD study paid by Greek Government notes that the number of suicide pacts at the end of 2013 tends to be stabilized. This is another economic indicator that health conditions of the citizens are getting stabilized.

8) Part of the plan referred above had to do with diagnostic related groups (DRGs-KEN) of hospitals and private clinics. Under Troika's pressure in order to correct numbers high rank public servants used to mix numbers of public health sector with those of the private sector. Pharmaceutical expenditure of state pharmacies started from 40m per month in 2012 and reached 75m per month at the end of 2013. total state pharmacies expenditure in 2013, 753m at a total of 2370m. from June 2012 to August 2012 Minister of health was Mr Lykourantzou, technician of the administration. Deputy Minister responsible for the pharmaceuticals was Mr Salmas, medical doctor. He faced dramatic shortages of medicines prohibiting parallel trade of certain drugs in a way out of the European internal market laws having the compromise of Troika. Greece accused of imposing illegal barriers in parallel trade.

9) In August 2013 Minister of health took over Mr Georgiadis, teacher of history and book seller. Fine expert of the market but knowing few of pharmacoeconomics he was based on those consultants who scheduled the plan of health transformations. Dedicated to complete the second Memorandum in the part of his responsibility Mr Georgiadis accepted the numbers of the new ceiling budget for 2014 to be 2b. phenomena of humanitarian crisis in health sector were already dense in 2013.

The PFS expressed great anxiety on new problems for the citizen's accessibility to medicines since pharmacy's expenditure for 2014 will be less than 1,4b. in this minimized number should be added up some of the expected new approvals. Fitted to this ceiling budget is the demand of 60% of prescribed drugs to be generics. The European status showed that in Germany and Sweden it took a decade to catch up with 60% of generics in their prescriptions. Greece according to Troika should do it in 2 months' time. Troika denied adequate answers why especially in Greece profit margins of the independent and slightly viable community pharmacies with a minimized economic size should at an average 15%. In Portugal community pharmacies with Quattro ply economic size is 17.5%.

Knowing the acute economic reasons and the rates of poverty Troika compromise over the continuous increase of co-payments. The average expense per capita per year is 178 euro (the European bottom) and the average co-payment is 28 euro.

10) The pricing policies followed favored certain not European pharma companies to penetrate economically violently Hellenic pharmaceutical market giving retreat to the development of the Hellenic pharma industry. Recent ministerial decree imposes ceiling budget in the number of prescriptions per doctor. It is about a mathematical model which does not respond to the real needs of patients since no relevant study has been done. It is expected from the early days of 2014 to be seen the results from the sacred obedience to the agreed numbers. Rumours coming again that beyond Troika's demands there are separate agreements with concrete plans of pharma industry and banks.

11) Deputy Minister of health today is Mr Mpezas, economist. He tries to manage the vast dimensions of a crisis ever happened in the health sector. 1,5m unemployed people, 250.000 new scientists immigrants to north European countries created a huge deficit in incomes of SSF. Troika pushes in a dramatic decrease of state support and in diminishing employers' payments to the SSF. Together with haircut of the deposits of the SSF due to the PSI and the retaining of money into banks for their reasons of recapitalization, the malfunction of EOPYY give an idea of this crisis. As far as we know the worst foe opposite to the efforts balancing social situations and reactions is the part of troika representing banks and IMF.

12) PFS wondered to troika why new measures unneeded since all targets for the year 2012-2013 were achieved successfully the answer was, persistence over simultaneous structural changes consistently under pressure have maintenance and sustainability over numbers. They are not responsible for the consequence over human subject. Great organizations and specialized European research institute (OBIG, ECORYS, WHO, LSE) sent to PFS questioners on how all these simultaneously applied changes result in sustainability and do not cause problems in social cohesion.

Hellenic government under political and economic pressure preferred not to ameliorate the ratio cost/effectiveness in pharmaceutical expenditure. This gave to

health indicators and the quality of ageing a free fall. According to Prof. Kiriopoulos it is unheard in peace period such a fall of health indicators which has been observed only in states under siege or war. <sup>[13]</sup>

## 4. TECHNICALITIES – METHOD

### 4.1 ESCALLATING PARTICIPANTS

Today in Greece there are almost 10.500 community pharmacies (population 11million inhabitants) where about 12.000 of community pharmacists work and function. Almost 2.000 of them participate to the courses of Continual Education, organised by IDEEAF. The manpower of community pharmacist according to answers shows that 62% are females and the escalation of their aging is 25-34 years old≈45%, 35-44 years old≈30%, 45-54 years old≈22% and 65-74 years old≈3% and their graduation come from Greece in 50%, Slovakia in 10%, Bulgaria in 15%, Italy in 5% and England in 15%.

**Table 1:** Distribution of participants according gender

<b>Gender</b>	<b>Male</b>	<b>Female</b>
<b>%</b>	8	62

**Table 2:** Distribution of participants according age

<b>Age</b>	<b>%</b>
25-34 years old	45
35-44 years old	30
45-54 years old	22
65-74 years old	3

**Table 3:** Distribution of participants according their graduation country

<b>Country</b>	<b>%</b>
Greece	50
Bulgaria	15
England	15
Slovakia	10
Italy	5

To compare this escalation is given the manpower of all pharmacists in Greece, according to PFS. The 65% of them are females, 41% of them are of the age below 40 years old and the 60% of them are graduated in Greece, 28% graduated in Italy (these numbers referred mainly to the generation up to 65 years old) and the rest mainly young pharmacists graduated in Slovakia (Bratislava), Bulgaria (Sofia), U.K. and a very small percent graduated elsewhere.

The comparison shows that the participating pharmacists to IDEEAF courses are mainly young and many of them graduated abroad and maybe they are aware of this type of education. This fact maybe shows the turning point to the leadership of both pharmacists and health care system responsible.

## **4.2 METHOD**

The studying aspects of Social Pharmacy evidently reaches the decision go through a comparison of the current situation of these aspects in Greece.

The Panhellenic Pharmaceutical Association (PFS) was approached together with the people from the IDEEAF's board. Since IDEEAF is the only official organ dealing with Pharmaceutical Care and Services in an education level, there was a collaboration in which it was requested the application of the questionnaire which follows. The questionnaire was presented at the front page of IDEEAF's site and thus it was facilitated the study to trice at a least level the present situation on Pharmaceutical Care in Greece. In order to conclude certain proposals to PFS was

scheduled this type of questionnaire motivated by the knowledge that was an unmapped area.

Starting point of examining concepts of Social Pharmacy was searching of the history of this particular sector. The primary efforts, studies proposals go back to the late 80's. At that time mainly in the University of Minnesota Twin Cities, USA, <sup>[21]</sup> under the conductance Albert I. Wertheimer worked together the team Linda Strand, Peter Morley and Robert J. Cipolle. Later on they were authors of the book *Pharmaceutical Care Practice, The patient centred approach to medication management*. This book pairs with another one which refers the *Behavioural Aspects of Therapeutics*, <sup>[6]</sup> consider to be basic element for those studying Social Pharmacy.

At the European level first efforts on Social Pharmacy about the same time underline the Uppsala University in Sweden <sup>[22]</sup> under the conductance of Prof. Cecilia Claesson. It was also that working team under Prof. Dick Tromp on Pharmacoepidemiology in Utrecht University in Netherlands <sup>[23]</sup>. In Brussels, PGEU institutionally participated to all deployed projects at EU level on Pharmaceutical Care.

When the perception of patient-oriented health systems occurred, due to the cost saving, the numerous studies and all relevant attempts came to the general basic knowledge of Pharmacy Faculties in Europe. Nowadays is centrally demanded.

It is estimated, enforcement of this concept for the new enhanced role of pharmacist and the great demand in general terms, by the relevant to health sector authorities to prove value for money of medicinal outcome even by the great economic losses of pharma-multinationals. Not to undervalue the interference of the great insurance companies. The former, maybe because they had to give birth at the new era of personalised therapies and the massive penetration of innovative drugs and biosimilars into the pharmaceutical market.

Unfortunately there was not any other relevant effort at PFS level in order to make the necessary comparison.

To approach a degree of pharmaceutical care and pharmaceutical services in Greece was concluded the contact and collaboration with IDEEAF since 1) Pharmacy Faculty of the Aristotelian University of Thessalonikis is Pharmacochemistry-oriented, 2) of Pharmacy Faculty the Kapodistrian University of Athens is

Pharmacognosy-oriented and 3) Pharmacy Faculty of University of Patras is Biochemistry-oriented. The whole scheduling of pharmaceutical studies from one point of view has to confront the medical doctors monopoly over all therapeutics. From another point of view, pharmaceutical studies had to follow the demands of, the still existing, health system which considers community pharmacists mainly being an extension of public service population. The last three years mainly under the pressure of European Institutions and by chance of cutting expenses the system should had been changed rapidly and violently.

Universities could not easily adopt these changes which transform the whole perception of the health care system from Medical-Centered to Patient-Centered. Also the pharma-industry in Greece still resist to accept these changes. The great danger for the lots of the community pharmacists is to lose their jobs, forced the PFS to establish courses of continual education. Somehow the department of Pharmaceutical Technology of University of Athens had begun the same kind of courses but this were not adjusted to the needs of pharmacists and they were only focused to the central region of Athens.

IDEEAF permitted the electronic appearance of the following questionnaire. To form this questionnaire were not examined certain stereotypes but there was a preparation after thorough examination of the courses (last three years), the demands and the anonymously given profiles of participants.

### **4.3 QUESTIONNAIRE**

In three months' time (January-March 2015) of questionnaire's appearance in the IDEEAF site, 172 anonymous answers were received. The average number of participants in those three months was 1500. The processing of the answers came up through the technical base of IDEEAF.

Below is given the English Version of the questionnaire with a general image of answers:

## QUESTIONARY OF PHARMACEUTICAL SERVICES

1. Do you know what pharmaceutical services are? What they are in general?

YES  89% NO  NOTES:

They accompany the medication with information and advices.....

2. Can you describe some of them that you deploy in your Community pharmacy? (small description)

.....Blood pressure measurement, Glucose level measurement, Dietary and nutritional counselling, Cosmetics counselling, Providing some vaccination and injections.....

3. Do you think they must be paid directly or indirectly?

YES  48% NO  NOTES:

4. Could you highlight them and how? (If YES a small description)

Some specific place for providing pharmaceutical services, great wish to fulfil their everyday practice only with pharmaceutical care and services.....

5. Do you know what is in general pharmacy care?

YES  32% NO  68% NOTES:



6. Can you create and keep pharmaceutical history of your patients?

YES  95% NO  NOTES: There are ready prepared programs in the electronic system

7. Do you think that in recording of patients' pharmaceutical history must be account behavioural and social factors?

YES  86% NO  NOTES:

8. How important is for you the safety of medicines and patient compliance with the therapy?

VERY MUCH  92% LITTLE  NOT AT ALL

9. How important is for you:

α) Cultural – eating habits

VERY MUCH  82% LITTLE  NOT AT ALL

β) Drug interactions

VERY MUCH  87% LITTLE  NOT AT ALL

γ) Use of generics for the perfect therapeutic result

VERY MUCH  LITTLE  NOT AT ALL

10. Do you think that specialized pregraduated and postgraduated education is required for all the above?

YES  NO  NOTES:

## 5. RESULTS – COMMENTS

### QUESTION 1

There is no differentiation of the acknowledgement of pharmaceutical services in general. Everybody answered positively showing that participants have a sense of pharmaceutical services accompanying the necessary info in counselling over medication.

### QUESTION 2

The description of the services in the pharmacy were blood pressure monitoring, nutrition-dietary projects, blood glucose measurement, counselling over medication and cosmetics.

### QUESTION 3

Almost half of them answered that pharmaceutical services should be paid for more, than it is within the profit margin of medicines.

COMMENT: It is estimated that the great loss of profits and the lowering of profit margins disorientate pharmacists giving as first priority their own economic survival.

### QUESTION 4

All pharmacists claim over a special place in their pharmacy to perform pharmaceutical services and all of them wish had the opportunity to fulfil their time in pharmaceutical practice with pharmaceutical services.

COMMENT: Pharmacists expressed the great difficulty of the Hellenic pharmacy mainly directed in all aspects by first pharmacist who is the owner.

#### QUESTION 5

A minority of pharmacists does not know what exactly is the pharmaceutical care. This is due to the lack of proper education and knowledge mentioned above.

#### QUESTION 6

All of them think that they are able to keep records of all patients. Besides all integrators of technical support of their electronic system supply them with ready programs of recording patients.

#### QUESTION 7

There is no objection over the estimation of social agents and behaviours of the citizens. That is because all pharmacists in their everyday practice, come face to face with the most brutal image of the economic crisis. 68% give different options of social agents maybe in order to dramatise their own personal case.

#### QUESTION 8

All of them pay attention of the safety of medicines and patients' compliance. They think is the main part of their job.

#### QUESTION 9

They pay attention over cultural-nutritional differentiation and over the drug interactions. There are comments against prescribing doctors (medication errors) and the imposed by health care system bureaucratic techniques, but these are not of the present reports concerns. The great majority of them sees positively the penetration of generics through the prescribing medicines by INN.

COMMENT: This is because the law gives right to the pharmacists to choose a generic balancing between price and effectiveness. This is a real enhancing of the role of pharmacist. [14], [17]

## QUESTION 10

All of them wish they had a better basic knowledge and education over pharmaceutical care and pharmaceutical services and they performed in different types and levels of criticism for the courses of IDEEAF.

It seems heavy duty for IDEEAF people to follow more independent continual education than that many times, in directly imposed by pharma-companies financing IDEEAF. This present report seems to indicate a new option for IDEEAF with better analysis and financing. Also in this report it is not mentioned the relative services concerning self-medication and non-prescribing medicines, but it could be a second phase with more thorough examination.

This study might be the first phase of an ongoing procedure. The second and third phase of questionnaires until the end of summer 2015 could conclude and properly suggest over IDEEAF courses for the year 2015-2016. Moreover, although, the main purpose of this study is not to cover the continual education demands, the latter is an obvious consequence of keeping high levelled of pharmaceutical care and pharmaceutical services.

For comparison reasons it is cited the questionnaire disseminated to all members by PGEU in an ongoing procedure which ends on 25 of May 2015. <sup>[9]</sup>

## 6. CONCLUSION – PROPOSALS

The urgent dramatic changes, as main proposal of this report are:

- 1) of the basic educational program in all three Pharmaceutical Departments of Greek Universities. Only fragments of these can be taught as part of Pharmaceutical Chemistry and Pharmacology. It is also common to re-examine separately OTCs and non-prescribing medicines and their contraindications, side effects and drug interactions in their studies programmes.
- 2) The Primary Health Care law the direct collaboration of the Panhellenic Pharmaceutical Association (through IDEEAF) with international institutions specialized on social pharmacy.
- 3) The evaluation of pharmaceutical services by ETESTA the company of the Panhellenic Pharmaceutical Association for the research statistics and analysis of pharmaceuticals as basic pharmacoeconomic support.
- 4) The ongoing procedure of questionnaires in a second phase proposed by PGEU at a more centralized way.
- 5) The immediate establishment of an accreditation system certified by the Panhellenic Pharmaceutical Association as qualified scientists. Now it's high time to accept the EU professional card. Together with the common EU pharmacies logo.
- 6) A separate part of therapeutic categories of services for the emergency and /or the "heroic" drugs should be ahead.
- 7) The necessary immediate legal and economic changes for the structure and networking community pharmacists in order to respond on the demands of pharmaceutical care and pharmaceutical services.
- 8) Improving the role of community pharmacist and health care system by using pharmaceutical care and pharmaceutical services in essence is the one way to keep pharmaceutical profession independent and viable. Particularly on the field of innovative drugs.

9) Especially for the Greek case, remains totally unsolved the economic problem for the health care system. Finances of the State and of the Social Insurances undergo great threats due to the need deepened economic crisis. The strictly limited budgets to redeem medicines might be a challenge for pharmaceutical care and pharmaceutical services to the away over both the rational use of drugs and the greatest efficacy and value for money of medicines.

## 7. SUMMARY

The report,

1) Examines the aspects of CPD within deepened economic crisis in Greece in order to find professional solutions for the near future as well as by means of personal economic survival.

Patients oriented, the political line of the health systems in EU, demands increased rates of training and well understanding of pharmaceutical services and pharmaceutical care. Either in hospital pharmacies or in community pharmacies. Almost half of the annual pharmaceutical expenses accrued by the so called expensive drugs special category. Almost half of the annual turnover of community pharmacies is of the OTCs and the negative list of medicines.

2) Deals with European surrounding and the present situation in basic education and continual training of community pharmacies in Greece taking into account the assumption that community pharmacies are part of the primary health care.

3) It is the outcome of collaboration with the Institute for the Continual Training and CPD (IDEEAF) of the Panhellenic Pharmaceutical Association which merely performs the unique thorough effort on the matter in Greece under the auspices and financing by pharmaceutical companies.

4) Traces the real needs of well-trained community pharmacists to improve value for both the benefit of patients and the Health Care System.

5) Method of the study: Disseminated a simple questionnaire to all those freely participating to IDEEAFs lessons. The anonymized responds give a first impression.

7) Concludes over

1) The urgent dramatic changes – as main proposal – of the basic educational program within pharmacy faculties in Greece.

2) The direct collaboration of the Panhellenic Pharmaceutical Association (through IDEEAF) with international institutions specialized on social pharmacy.

3) The evaluation of pharmaceutical services by ETESTA the company of the Panhellenic Pharmaceutical Association for the research statistics and analysis of pharmaceuticals as basic pharmacoeconomic support.



- 4) The ongoing procedure of questionnaires in a second phase proposed by PGEU at a more centralized way.
- 5) The immediate establishment of an accreditation system certified by the Panhellenic Pharmaceutical Association.
- 6) A separate part of therapeutic categories of services for the emergency and/or the "heroic" drugs.
- 7) The necessary immediate legal and economic changes for the structure and networking community pharmacists.
- 8) Improving the role of community pharmacist and health care system by using pharmaceutical care and pharmaceutical services in essence is the one way to keep pharmaceutical profession independent and viable.
- 9) Especially for the Greek case, remains totally unsolved the economic problem for the health care system. Finances of the State and of the Social Insurances undergo great threats due to the need depend economic crisis.

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## 9. APPENDIX – QUESTIONNAIRE FOR SURVEY



**Ινστιτούτο Δια βίου  
Εκπαίδευσης & Επαγγελματικής  
Ανάπτυξης Φαρμακοποιών**

### ΕΡΩΤΗΜΑΤΟΛΟΓΙΟ ΦΑΡΜΑΚΕΥΤΙΚΩΝ ΥΠΗΡΕΣΙΩΝ

1. Γνωρίζετε για τις φαρμακευτικές υπηρεσίες; Τι είναι γενικά;

ΝΑΙ  ΟΧ  ΠΑΡΑΤΗΡΗΣΕΙΣ:

.....

2. Μπορείτε να περιγράψετε κάποιες που ασκείτε στο φαρμακείο σας; (μικρή περιγραφή)

.....

.....

3. Νομίζετε ότι πρέπει να πληρώνονται άμεσα ή έμμεσα;

ΝΑΙ  ΟΧΙ  ΠΑΡΑΤΗΡΗΣΕΙΣ:

4. Θα μπορούσατε να τις αναδείξετε και πώς; (Αν ΝΑΙ μικρή περιγραφή)

.....  
.....

5. Γνωρίζετε γενικά τι είναι φαρμακευτική φροντίδα;(pharmacy care)

ΝΑΙ  ΟΧΙ  ΠΑΡΑΤΗΡΗΣΕΙΣ:

6. Μπορείτε να δημιουργήσετε και να κρατήσετε φαρμακευτικό ιστορικό των ασθενών σας;

ΝΑΙ  ΟΧΙ  ΠΑΡΑΤΗΡΗΣΕΙΣ:

7. Νομίζετε ότι στις καταγραφές φαρμακευτικών ιστορικών ασθενών πρέπει να υπάρχουν συνεκτιμήσεις συμπεριφορών και κοινωνικών παραγόντων;

ΝΑΙ  ΟΧΙ  ΠΑΡΑΤΗΡΗΣΕΙΣ:

8. Πόση σημασία δίνετε στην ασφάλεια των φαρμάκων και στη συμμόρφωση των ασθενών με τις θεραπευτικές αγωγές;

ΠΟΛΥ  ΛΙΓΟ  ΚΑΘΟΛΟΥ

9. Πόση σημασία δίνετε:

α) στις πολιτισμικές – διατροφικές συνήθειες

ΠΟΛΥ  ΛΙΓΟ  ΚΑΘΟΛΟΥ

β) στις αλληλεπιδράσεις των φαρμάκων

ΠΟΛΥ  ΛΙΓΟ  ΚΑΘΟΛΟΥ

γ) στη διείσδυση των γενοσήμων για το άριστο θεραπευτικό αποτέλεσμα;

ΠΟΛΥ  ΛΙΓΟ  ΚΑΘΟΛΟΥ

10. Νομίζετε ότι απαιτείται ιδιαίτερη προπτυχιακή και μεταπτυχιακή εκπαίδευση για όλα τα παραπάνω ερωτηματικά;

ΝΑΙ  ΟΧΙ  ΠΑΡΑΤΗΡΗΣΕΙΣ: