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MEDICAL PRESCRIPTIONS IN CYPRUS

(Diploma Thesis)

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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.

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LIST OF ABBREVIATIONS

BOC	Bank of Cyprus
CGMP	Code of Good Manufacturing Practices
CPL	Companies Private Law
CYP	Cyprus Pound
DEOK	Democratic Labor Federation of Cyprus (in gr.)
EU	European Union
EU15	Member States of European Union
EUR	Euro
GDP	Gross Domestic Product
GHS	General Health Scheme
HD	Health Education (in gr.)
ID	Identification number
in gr.	Abbreviation in greek language
JIT	Center for Economic Research (in gr.)
KEDIFAP	Connected Pharmacies
LFS	Labor Force Survey
MoE	Ministry of Education
MoH	Ministry of Health
MP	Medical Prescription
MPC & WCPC	Maternity Protection Centre & Welfare of Clinical Child & Prenatal Care
NHP	National Health Plan
NHS	National Health System
OECD	Organization for Economic Cooperation and Development
OTC	Over The Counter Drugs
PB	Prescription's Book
PEO	Pan Cyprian Federation of Labor (in gr.)
PGEU	Pharmaceutical Group of European Union
PIA	Primary Health Care (in gr.)
RC	Red Cross
RH	Cyprus Health System (in gr.)
RP	Repeated Prescription
SEK	Federation Parastatals (in gr.)
WHO	World Health Organization

1. INTRODUCTION AND AIM OF DIPLOMA THESIS

In Republic of Cyprus, there is no national Health system with universal coverage of the population, but a combination of public and private service health providers. Various socio-economic and political factors have laid significantly, both the typology and the characteristics of the Cyprus Health System.

This thesis attempts to describe the National Health System in Cyprus and then emphasize the factors related to medical prescription and the overall supply in health services. The National Health System of the Republic of Cyprus is one of the least founded in Europe and includes many problems that inflated through the years. The current social and economic conditions require remodeling of the basic rules and principles of operation. A characteristic of the provided care in Cyprus is the very high participation of the private sector. ^[30]

The existing legislation that is related to trafficking in pharmaceutical and cosmetic formulations consists of a verbose of Laws that have included many regulations and directives of the European Union.

The aim of diploma thesis is detailed describing and demonstrating the medical prescriptions in Cyprus in order to get their current knowledge, rules of use, their kinds, practical handle, payment and finally illustrate and determine examples of Cypriot medical prescription. Secondary aim is to illuminate the Health system of Cyprus. The knowledge of current Health system is essential for better understanding the recent situation that exist now according prescribing of medical preparations.

2. HEALTH SYSTEM IN CYPRUS

The Cyprus Health System (RH) does not have a long course of development. It began on British occupation of the island when it was the first social security system (Beveridge), 1957. The course health development and organization are closely tied to the actual course of development of the Republic. The unfavorable political and social conditions, and the Turkish invasion affected negatively the development and organization of the RH. Additionally, the lack of political will, the problems of public administration and organized reaction delayed reforms that would lead to the creation of a National Health System (NHS). Today, Cyprus is the only country of the European Union which lacks a NHS that covers the entire population as a result the government is facing important problems related inability to design a single policy, structure, organization and operation of the system, as well as inequalities in offering health services.^[10, 34]

Health System of Cyprus is based on the organization, financing, production and distribution of health services created the first health systems.^[46] The way of the health care is different in each historical period and is linked to social and economic systems that established and defined human societies.^[42] This means that the organization and development of health services reflect the general political, socio-economic philosophy and ideology of each era and each society and the health needs of the population.^[22]

In Cyprus, there is no universal coverage of the population, but a combination of public and private service providers. Fifty seven years after its implementation, the government continues to provide significant services to Cypriot citizens, based on the fundamental principles of the social welfare state, taking on forms of social policy based on the principles of social justice and the planned industrial action, freedom, utility the availability and accessibility of health services, with an ultimate goal the welfare of its citizens and eliminate the social inequalities in health.^[15]

According to Mill^[22], the achievement of the above helps to create a sense of security in society and the development of mutual aid and social perspective. These values are pillars and principles for establishing policy of social welfare of RH^[23]. The principles of equality, solidarity, dignity and social justice for the reduction of challenging social inequalities should be applied. The application of these principles was adopted, owever, the Council has serious problems and glitches.^[1.2]

2.1 EQUALITY OF HEALTH SERVICES

Equality in the use of health services is open to two conceptual definitions. The first refers to the equal treatment of equals. The second relates to the non-equal treatment not equal people, i.e. people with heterogeneity health needs. ^[42] According to Mooney, there are seven determinants of equity which are gender in expenditure per capita, per capita resources, resources for equal needs, access for equal needs, use of health services for equal needs among population groups, and the marginal health needs being addressed for each population group and gender in health. ^[27]

In the public sector, the main source of funding for services is the health budget through general taxation (model Beveridge). ^[10] So is public in nature and governed by the principle of compulsory participation, equity, social justice and solidarity through the equal needs of citizens are achieved by increased government intervention and action ^[38]. The health policy of the Ministry of Health is governed by the fundamental principle that the good "health" is a social good while ensuring it is State obligation and responsibility. ^[43] Key feature of this policy is the increased state intervention, social solidarity, universal and comprehensive health coverage of the population equal access to health services and to ensure a minimum income for the whole population through an effective and efficient social protection system. ^[45]

Such a "tight" system by Marshall ^[21], supporter of the welfare state and their descendants, should promote social justice through equal access to a service needed for a very important social good, such as health and according to Mill, the absence or compromise of which would undermine this same culture. ^[22] The services are provided free of charge to families with many children, disabled and chronically ill. Civil servants, government officials and military services are provided free with little additional payment. In the general population, the criteria for free care or reduced fees or all fees are depending on income and family status. ^[25]

According to the World Health Organization, 80.0 % - 85.0 % of the population is free covered ^[15, 44]. Therefore, it appears that in practical application, there is an equal and universal coverage and full participation of citizens in RH, thus altering the fundamental principles involved, which cannot be classified in the category of national health systems. The theorists of the welfare state supporters Parker King, Waldron and Barbalet argue that "participation" and "involvement" of rights can be used as fundamental principles of relations against income inequality and secured a "national

minimum". These are presented as keys, because they reduce the exploitation and the problems arising from the free market in health, supported by neoliberal policies as well as contribute to universal equality. They argue that a society without universal service would not cover the fundamental principles of equality, justice and would not provide the "participation of" rights of all its citizens. ^[22, 12] Additionally, there is a disparity in payment services and the burden of health spending increased more for households with lower incomes than those with higher incomes. Also noticed that expenses increased more for households caring for people with chronic diseases and this can lead to financial ruin. ^[15]

2.2 NOWADAYS-21ST CENTURY SITUATION

Cyprus is showing positive economic performance comparable to the overall favorable labor market situation. Poverty and social exclusion does not seem to be major problems, although there are pockets of exclusion in certain socioeconomic groups. Over the last years there was a gradual increase in the GDP, which reached 4.4 % in 2007. ^[8] The overall unemployment rate stands at 3.9 %, is significantly lower than the EU average is equal to 7.1 %. Youth unemployment has been declining and estimated at 10.1 %, which is below the EU average is 15.3 %. ^[49]

Life expectancy is higher than the EU average and stands at 79 years for men, higher from many EU countries, and 83 years for women. Total expenditure on social protection in Cyprus found that amounted to 18.1 % of GDP in 2006. In allocating these costs per basic function, it is found that a significant share of benefits available to senior citizens and survivors (8.3 % of GDP), followed by health care sector (4.6 % of GDP). The government expenditure on health is a particular challenge. Cyprus has a very low percentage contribution to total public health spending (43.2 % of total expenditure) and the bulk of health spending covered by direct payments to patients, thus creating inequalities in access to quality care health. Regarding the recent economic crisis, it is worldwide known that Cyprus is the only country that closed one of biggest Banks of island during the European economic crisis of 2013 as a result thousands of people lost their money from bank's accounts. This Phenomenon in financial Vocabulary is called "bail in". ^[54]

In simple words, Cypriots lost huge amount of money since one of the two biggest banks of island bankrupted and the other bank called National Bank of Cyprus

(BOC) bail in the personal accounts of all clients. Bail in is the procedure of rescuing the country or bank with equity instruments. It takes place before bankruptcy if it is determined that either the bondholders or depositors should be "trimmed" and record losses. ^[54]

The government estimates that there will be significant damage to the island's economy in the financial sector. However, economic activity, mainly in construction and tourism is expected to improve the chaotic situation that exists nowadays. During 2014 the government estimates dramatically decrease in GDP as well as important increase in unemployment rate but still it's too early to estimate specifically the correct percentage that the economic crisis as well as the bankrupted will cost. ^[54]

2.3 NEOLIBERAL POLICY IMPLEMENTATION IN THE HEALTH SYSTEM

Ineffectiveness and inefficiency of the health care system leads to a neoliberal "market model" for health on the other hand, the public sector, the Council creates bureaucrats dysfunctions leading to long waiting lists and inevitable reduction in service quality.

Thus, under the rule of the Marxists breed inefficiency deliberately, thus providing the opportunity for private capital investment and profitability in the health sector ^[9]. Most hospitals in Cyprus is traditionally organized, i.e. they tend to follow the classical theory of the organization comes from the theory of bureaucracy, described by the German sociologist, in the 19th century, Max Weber. Hospitals are mainly structured in bureaucratic organizations and authorities used bureaucratic ^[40]. Such an approach, according to Weber, has so far developed and autonomous which now defend their own interests, who need to improve benefits (health) should be seen immediately from this perspective. Reinforcing this view, Burnham, criticizing the social welfare state, ^[5] referred to the revolution of the directors, who slowly undertake the overall management and administration of the whole society, thus violating the fundamental principles underlying the same social welfare. ^[4]

Finally, strengthening the theory that government inaction on social assistance through government officials, liberals and especially Iaye, Friedman, Buchanan and Lees argued that state officials has strengthened so much that it has managed to

dominate the society and to trample the fundamental principle freedom. ^[31] In the public sector, patients spend triple time than in the private sector to serve. The waiting time for an appointment is much higher in the public sector than in the private.

This affects citizens to prefer to pay the private sector to avoid the hassle. The development of the private sector to a large extent, affects the accessibility of economically weak patients and persons of low social strata, creating disparities in access and quality of care, which is offered only "the few and elite". ^[31]

As a result of the above, public health services are mainly used by humans with lower incomes and patients with serious or chronic illnesses. ^[1] From the above it is found that the public Health system operates with such inequities and administrative barriers to effective access, which incites citizens to private health services and secondary and tertiary care. ^[35] Additionally, it contributes to the stagnation of the RH and especially inefficient development of primary health care with regard to the institution of the family doctor who will act as a filter and locate the development of Community Nursing, which will enlighten, strengthen and will change the perception of people about prevention rather than cure. Neoliberal principles and policies in Cyprus Health System in recent decades, under the influence of factors exercised strong pressure for change in the fundamental principles underlying the existing Health system. Consequently, the promotion of reforms "type market" in RH started with socio-economic options-dramatic growth of private sector financiers profitable placements in selected areas of health services and offer luxury services to affluent sections of the population and not the real needs of vast majority of citizens. With this policy, health services, there is agreement with the Marxist analysis, the state interfering allows private capital to invest where there is a profit since it covers the area of non-profitable activities, while also assumed that the function of the state welfare is one piece of the contradictions of capitalism. ^[3]

In the private sector, neoliberal health policy prevails, according to government intervention which is relatively limited and the freedom of choice is booming, prices are determined by supply and demand, creating a "market model" health otherwise logic from that prevailing in the state Health system. ^[19] For liberal theorists, the ideas of social equality and social justice is incompatible with the idea of freedom as it is needed to achieve the government intervention through policies that would reduce the range of freedom of choice and action, which is oppression. ^[13] The main funding comes from private sources and the means of production are mostly privately owned. With these

criteria, it appears that much of the health service operates as a parallel system in the form of liberal or Companies of Private Law (CPL), violating the already dented—as discussed above—the fundamental principles of Welfare State Council, those of equality, the right to access, availability and accessibility of health services in particular, since the society in Marxist, becomes more callous and social class. ^[3]

However, the private sector is based on profit and operates in a competitive environment. Research done by the Ministry of Health showed that the private sector charges vary by specialty and region. In some cases it can reach triple charges from some experts, mainly exploiting the shortcomings of the public both in technology and in hotel equipment. ^[1] Besides, a number of factors, such as low quality and reliability of public and the inefficient way of organizing the public hospitals (timetable, failure appointments, waiting lists, centralized services in the capital city) became unfriendly to the patients. This leads to disparities in the organization of the RH. The principle of freedom of choice for patients according to their neoliberal Health system in the public sector, the freedom of choice for patients is limited and to some extent inevitable. This is confirmed by research where patient consider the option of a doctor in the public system in Cyprus is not as good as the private sector. According to Sarris, health, wasting is the patient while he decides the doctor. ^[36]

In addition, the patient remains passive receiver, no view and can participate, not only in health interventions concerning him individually, but also in the design of health policy. The power of knowledge and the ability to formulate a treatment charismatic power-doctors and nurses-creating a monopoly on health, by Marxists strength of this power gives them the right to behave sometimes arbitrary and unethical to unprotected patient. ^[14] In order to democratize, effective social control services and safeguarding the fundamental principles of dignity and respect for the individual, the Ministry of Health has implemented since 2005, the safeguarding and protecting the rights of patients. This Law guarantees the rights of patients, by adopting effective mechanism for monitoring respect for rights. Furthermore, the mechanism was established complaint handling in hospitals. Instead, through private expenditure ensured the patient the right of free choice of doctor or hospital they want to use. ^[38] The right to health also often depends on the financial situation of the individual. ^[13, 38]

2.4 SYSTEM OF FINANCING AND COVERAGE

The coverage of patients is an important element in the organization of the healthcare system is the way to cover the cost of the disease, when the need arises. To cover the costs of illness are five different systems, while the state operates sixth program, which covered the total population for medical services that are not available in Cyprus. Please note that some people likely to have double and triple coverage. Unfortunately there is no data regarding the number of people, covered by each system. These systems are ^[20, 41]:

1. Coverage of people with low incomes through public health services

The first type of coverage offered by the state and for the poor people. The state provides free coverage to those considered poor based on income criterion. The eligible people must be certified for the income level of the community from each community from which they come. These people do not pay any price currently receiving the service apart from some low fee for registration if you are under the age of 65. (The State publishes the income criteria for this project)

2. Covered employees groups through projects that offer employers and trade unions

The second type of coverage regards the employees who are offered coverage for health care plan operated by employers or labor unions. These projects are either free under the terms of employment or for a contribution received from the employee's salaries. The free coverage without contributions of beneficiaries is supplied by the state and semi-government organizations through the terms of their employment. These ones cover civil servants and Parastatals. ^[20]

3. Covered by employer plans and plans against labor unions contributions

The third division includes the following categories:

- Employees of mainly large companies in the private sector. The major part consists of employees in the banking sector
- State Employee Unions (PEO, SEK and DEOK).
- In these cases the patient pays at the time of service and the plan will cover either the whole or part of the cost according to the provisions of each plan.

Unfortunately there is no information of the number of persons, covered by these plans. ^[32]

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4. Coverage of the income of the patient at the time of need

The fourth way of meeting people is the time of this need that people resort to private health services and public either by the payment of health care costs from their income. Some people may take refuge in the public sector and pay the predetermined fee for the required service. ^[20, 16]

5. Cover Medical Insurance Plans

These plans are generally offered and available to anyone who finds that has no other adequate coverage. In some cases these plans are supplemental coverage for the person who acquire them. Contribution towards paying companies, promises to cover the cost of care based on pre-agreed fees with providers. Similarly, the patient pays the cost of servicing and returned either whole or part, depending on the project and the kind of care. ^[20]

6. Coverage for all Cypriots abroad for treatment in the specialist skills not available in Cyprus

Through this project the state covers the cost of treatment to income criteria. Provide full coverage for poor people. Part of the cost is covered by the reduced level of income of the family of the patient. The state does not cover transition costs or the costs of escorts. ^[20]

As a final point, the prescribed medicine in Cyprus must be entirely paid by the patient and then it depends of each patient's coverage system the amount of the compensation that he will receive back.

2.5 CHALLENGES AND FUTURE REFORMS

The fact that the Health system of Cyprus needs reform is not of course, something new. Moreover, those who specialize in healthcare know that the existence of these weaknesses, to a greater or lesser extent, in Health systems in all countries, including those with a long tradition in the field of healthcare. The key message of this comment is that the Cypriot citizen would feel the problems of the Health system increasingly strong over time because it will increase both the demand for medical care due to demographic and other changes, and the cost of health care due to the implementation of improved and more expensive treatments. The reform of the system should be searched based on criteria of efficiency, with specific (quantitative) objectives and defining the role of government and private sector. ^[18]

Starting from this observation the Center for Economic Research of the Cyprus University conducts research aimed to document the ineffectiveness of the current health care system in Cyprus, to assess the influence of demographic, socioeconomic and other characteristics in the demand for health care and to provide increased needs that will face the Health system in the future because of anticipated changes to the factors which determine. The results provide evidence for the size and significance of the impact of the independent variables on health expenditure in Cyprus. ^[7]

- The exogenous time trend envelopes a statistically significant impact on public health expenditure and estimated that they grow 4.0 % a year on average.
- The effect of per capita GDP on private health expenditures are statistically significant increase in per capita GDP by 1.0 % leads to an increase in private health spending by 0.8 %, which shows that private expenditure is inelastic income.
- The percentage of the population over 65 in the total population has a statistically significant impact on healthcare costs. Increase the proportion of the population over 65 by 1.0 % leads to an increase of 1.2 % and 2.8 % in the private and public health expenditure respectively. ^[17]

From the above considerations may draw some conclusions about the direction in which you move the costs in the future, based on assumptions about the future course of the independent variables, with other factors constant. For example, according to projections from the Actuarial Review. ^[17]

Estimates suggest some future trends very likely to hold, as the pressures on public health expenditure mainly due to an aging population and pressures on private spending by both the aging of the population (to a minor degree than in public) and the growth of per capita GDP. Population growth over 65 seem to affect more public health expenditure, since there is a tendency to move from the private to the public sector by increasing the age, because of the right free government care of pensioners, mainly due to lower income, lower cost opportunity of waiting in public hospitals for the elderly etc. ^[10]

Nevertheless the implementation of the GHS is expected to cause profound structural changes in the Health system in Cyprus, as provides universal coverage with the cost of state-funded and mandatory contributions of employers, employees and retirees. So in view of the change in the system is expected in the future increase in public and shrinking private health care. As demand for health care is unpredictable and involves high costs could be addressed by buying health insurance on the open market in the absence of government intervention. But this would leave some people with health problems without insurance, as the private sector is likely to have to bear a high cost of their care. ^[39]

So the State intervenes and purposes of social justice and equality by providing free medical care to all citizens or those who need it most (case of the Health system in Cyprus). Also, the State intervenes through the state health service for purposes of income redistribution from the highest income families (after the state medical care is financed through tax / contribution) at lower (through the use of free services). ^[7]

Given that the state intervention in the healthcare market is parallel with the operation of the private sector, this remains as weaknesses in the Health system. When health care is funded either by the state or by a private security market, trends over consumption and inefficiency are created since neither the doctor nor the patient have an incentive to limit the used resources by the system (moral hazard). Additionally, due to asymmetric information between doctor and patient (principal-agent problem) the course of the second depends solely on the diagnosis / advice received from the first. ^[29]

Despite the problems that entail a Health system that works with a combination of private and public sector as shown by the analysis of individual countries, they spend a significant proportion of their GDP on health services. For many European countries the figure exceeds 9.5 %, while Cyprus is much lower (6.9 % in 2002, according to data

from Eurostat) and below the average of the EU15. Also the econometric analysis showed that the costs of the European countries increase with increase in per capita income and the increase in life expectancy at birth and to a greater extent with the increase in life expectancy after 65, which in several countries began to create pressures to contain healthcare costs in the public sector. A large proportion of health expenditure, which for most European countries exceeds 70.0 % are health expenditure in the public sector, while Cyprus has the smallest percentage of public health expenditure than all European countries. Therefore a large part of health expenditure in Cyprus goes to the private sector. ^[6]

Thus, apart from cases of non-state universal coverage of the population (the existence of the private sector is essential to serve the people without coverage), the private sector can work for buying health services from people who have coverage but find very low the quality of public sector services or for additional consumption of health services beyond those provided by the public. This health care system of Cyprus does not offer universal free government care but a sizable percentage of the population 85.0 % - 90.0 % have access to free or reduced cost state health care, which is financed from general taxation. So there is great motivation in the public sector for efficiency and cost containment, since largely financed by public funds. ^[15]

Other weaknesses of the Health system in Cyprus, such as the use of outdated and inefficient management practices led to the expansion of the private sector which impacts on social equality. ^[10]

The private sector is used to purchase health services from both individuals without access to free public services and by persons who have access (free or reduced cost) but consider the quality (e.g. longer waiting, less infrastructure than the private sector, etc.) and / or the amount (during a medical visit or stay in the hospital, etc.) inadequate and either choose to buy services from the private sector entirely or to supplement public health services with purchases from the private sector. This has resulted in the continued expansion of the private sector, reproduction (duplication) of the private sector services that were offered free or at a lower price from the public and an over increasing cost of health services. The analysis of health expenditure of households showed that teams that have access to free government health care as public sector workers have higher expenditure on health from the private sector employees, a figure which does not have access to free services. ^[15]

In the end, the econometric analysis showed that households whose head has public coverage have significantly lower health care expenditure (or share of health expenditure in their total expenditure) than households whose head has no coverage. Thus, the results provide evidence of waste, since the beneficiaries do not seem to benefit through reduced costs for health care. [28, 29]

3. PROVIDED SERVICES AND LEGISLATION

3.1 HEALTH CARE SERVICES

According to the Ministry of Health, caring divided into the following categories: [23]

- Medical Services and Public Health.
- Pharmaceutical Services.
- Dental Services.
- Mental Health Services.
- Nursing Services.

Briefly, in the following pages is stated the main services, provided in the Health Care System of Cyprus [23, 24]:

- I. Primary Medical Examination. Examined pathologically and pediatric cases.
- II. Secondary Medical Examination in the following subspecialties:
 - a. Oncology incidents.
 - b. Renal incidents.
 - c. Endocrinological incidents.
 - d. Clinical Infectious Diseases.
 - e. Clinical Genetics.
 - f. Clinical Neonatology.
 - g. Pediatric Intensive Care Unit.
 - h. Clinical Psychiatry.
- III. Purchase of services for:
 - a. Incidents of child, or not, neurology.
 - b. Cardiology incidents.

IV. Pediatric Surgery incidents medical examination, surgery and postoperative monitoring.

V. Gynecological / Obstetrical Examinations.

a. Pap test.

b. Colposcopy.

c. Clinical Cancer.

d. Low fertility clinic.

e. Prenatal testing.

f. Surgical gynecological / obstetric interventions.

g. Speech therapy for children and adults.

h. Physiotherapy.

VI. Audiometric screening for children.

VII. Thalassemia Clinic.

VIII. Ophthalmologic Clinic with specialized tests and eye surgeries.

IX. Endocrine Clinic.

X. Dietetics.

XI. Social worker.

XII. Department of Patients Rights.

The basic principle of these services is the prevention of disease as well as the maintenance and promotion of health. Within this framework, unfortunately, detailed description of all the services is not possible and is not the primary subject of this thesis. ^[25]

3.2 NEXT SERVICES AND ACTIVITIES

Health Education

Health planning and implementing health educational programs to individuals and groups is based on the guidelines of the relevant Departments and institutions and in accordance with the relevant standards of health education. Using the knowledge and experiences, they organize, implement, evaluate and adjust programs of the Health Education (HD) at school, in the community, individuals or groups, following research and progress in the health sector. Within the context of health education in the

community coordinate and collaborate with other health workers to implement health education programs to prospective parents and pregnant women: [25, 37]

- Plan and implement health education for the elderly and can involve primary or secondary prevention.
- Health education in the community can relate to other groups, such as juveniles, parents, scouts, members of associations or foundations.
- Apply manipulations community intervention for the selection of community actors and determining how their participation in health education programs and general health protection.
- Conduct home visits for health advisory to high-risk groups such as patients with cancer, heart disease, accidents, tuberculosis, etc. and to vulnerable groups such as elderly, pregnant women, infants and children.
- Provide for developing the educational status of rural health centers.

School Health Service

Inside the school, the health service goes according to the guidelines of the Office and following the relevant standards: [25]

- Practicing functional role, which includes activities such as periodically examining students, mitigation measures of infectious diseases, of vaccination.
- Provide immediate care in case of illness or accident.
- They shall inform the school population for various health issues.
- Coordinate and provide care to children with chronic diseases or any acute problems occur and plan ongoing care for these children in places outside school such as home or hospital.
- Act as advisors and advocates for students. Offer their opinions and make suggestions on issues related to a particular child or more children on a matter concerning them and are relevant to health. [25]
- Perform periodic inspections at school canteens on the available products and health facilities of the building and made their presentations.
- Perform periodic inspections of health facilities of the school building and inform the staff that deals with the cleanliness of the public areas.
- Accompany students on camps of the Ministry of Education (MoE) and the Red Cross (RC) and adhere to the relevant responsibilities.

Organizing events on topical issues

Officers of the department organize and cooperate with other officers for organizing events on topical issues such as World Health Day, the World No Tobacco Day or Week Accident Prevention, the Heart Disease Prevention Week, Global Day against AIDS and the European Week against Cancer. Within the context of these events is health education to students and the public. ^[25]

3.3 PHARMACEUTICAL LEGISLATION

The pharmaceutical legislation in Cyprus is divided into five key areas ^[23]:

- The Medicines for Human Use Laws
- The Cosmetic Laws
- The Narcotic Drugs and Psychotropic Substances Laws
- The Pharmacy and Poison Laws. ^[50]
- The Pharmacists (Associations, Federation)

It is not possible to record in detail all the legal provisions relating to pharmaceutical legislation. Instead we focus on the description of the provisions relating to the administration of drugs and cosmetics products. Also it is necessary to describe the current legislation, concerning the costing of a medicament to be released in the market.

The division is coordinating the legislation with the *acquis* on the implementation of which is the responsibility of the Veterinary Services. Specifically, is responsible for monitoring the *acquis communautaire*, the study of European directives, regulations, decisions and case Law of the European Union concerning matters falling within the mission of Pharmaceutical Services and drafted Laws to harmonize national Law in accordance with the *acquis*. ^[23]

Legislation for Medicines for Human Use. ^[23]

- The medicines for Human Use, Law 59 (I) of 1962
- The Medicines for Human Use (Control of Quality, Supply and Prices) (Amendment) Law 20 (I) and Law 75 (I) of 2006.
 - The Medicines for Human Use (Control of Quality, Supply and Prices) (Amendment) (No. 3) Law 104 (I) 2006.

- The Medicines for Human Use (Good Clinical Practice) (Amendment) Regulations of 2006 (PI 318/2006).

Legislation for Cosmetics

- In the Cosmetics Ordinance of 2006 (PI 281/2006).
- In the Cosmetics Ordinance (No. 2) Regulations 2006 (PI 347/2006).
- In the Cosmetics Ordinance (No. 2) Regulations 2006 (PI 434/2006).
- Notification Cabinet for entry into force of the Cosmetics Products (Good Manufacturing Practice Rules) Regulations of 2004 (PI 272/2006).

The Division is responsible for the implementation of the Cosmetics Act 2001, which is fully harmonized with the EU acquis. According to this Law has established Council Cosmetics, with main responsibilities permitting the marketing of cosmetic products containing banned substances and licenses to ensure commercial confidentiality, regarding the ingredients in cosmetic products. The Council also has advisory powers to the Minister of Health on issues, relating to cosmetic products ^[26]. The Division is also responsible for monitoring the market and for this purpose it works closely with other agencies such as the General Chemical State Laboratory and the Department of Customs. The on Cosmetic Products (Code of Good Manufacturing Practice) Regulations 2004, which were enacted in 2004, entered into force by decision of the Cabinet on 30/06/2006. According to the above regulations, the total or partial manufacture of cosmetics is permitted only after authorization will provide the Council Cosmetics.

The Council Cosmetics issue the manufacturing authorization only if certain criteria are met, following an inspection carried out by authorized officers of Pharmaceutical Services and relevant recommendation to the Council on Cosmetology. Under the above regulations, all manufacturers of cosmetics in Cyprus must submit an application for a manufacturing authorization, together with a request for inspection of the premises. It has already begun the submission of the applications, while Pharmaceutical Services have carried out two inspections. The aim of the cosmetics department for 2007 is to inspect all premises manufacturing cosmetic products for the issuance of manufacturing licenses and ongoing compliance with the Code of Good Manufacturing Practices (CGMP) for the effective protection and consumer safety ^[23].

Narcotics and Psychotropic Substances

The Narcotic Drugs and Psychotropic Substances Law 1977 came into force on 29 June 1979. Indicates the controlled substances and contains tables categorizing them. Moreover it includes strict provisions on importing, exporting, manufacturing, possessing and use and defines relevant offences and respective sentences. It gives the Council of Ministers the power to issue regulations to facilitate the implementation of its provisions, and the Minister of Health to issue Orders defining controlled substances amongst other things. ^[50, 52]

Cyprus Pharmacist Federation

Cyprus pharmacist federation was found in 1954 accordance with the provisions of the Associations and Foundations Law. It represents all Greek Cypriot Pharmacist and has vital roles such as: ^[53]

- To regulate the Conduct referred of the pharmaceutical profession.
- Rules on matters, which affect the business of Conduct.
- Submits recommendations on pharmaceutical legislation and on other medical issues submitted to the Council and suggest recommendations to the Government.
- Whether it is desirable to introduce new legislation.
- To promote good relationships between pharmacist.
- Regulate absences and holidays of pharmacist.

Pricing of Medicines

In 2006 about 281 new drugs change prices. From June 1, 2006 issued a new price list drugs following the decision of the Cabinet to increase the wholesale price of drugs whose price is reduced by the application of the new pricing policy by CYP £ 0,30 (0.51 EUR) provided that the new wholesale price does not exceed retail price of 2004. Also, the decision extends for generic pharmaceutical products for the retail price can be up to 80.0 % of their originals, provided that the requesting marketing authorization holder for the medicinal product and the new retail value found does not exceed the retail price of 2004. The list contains 2,195 pharmaceuticals. The sector participated in the Transparency Committee of the European Union in November 2006. ^[23, 26]

4. MEDICAL PRESCRIPTIONS IN CYPRUS

The formula of MP in Cyprus is common for all the prescriptions. ^[50]

The majority of prescriptions are in white paper form but there is no rule that is making the white color as compulsory in order to be valid. Prescriptions can be different in size and color of the paper form but all of them should contain the standards, which are indicated by the Ministry of Health.

The standards are the doctor's name and specialty as well as personal information such as telephone number, address, fax and email. ^[50]

In addition the prescription must contain on the upper part the name of the patient and the date that has been examined. It's not problem if the name or date is not hand written. Below the name in the middle of prescription there are always the prescribed medicines as well as the daily dose. There is no limit to the amount of drugs that doctor can prescribe.

All the drugs written on prescription must be handwritten and not printed. Moreover the drugs must have the empirical name of the product not the active substance. The doctor is exclusively deciding the product but the pharmacist has the ability if the patient agrees to offer the same active substance in generic form. If the active substance is the same but the empirical name of product is different, it is acceptable by MoH.

In the end of every prescription must be always the signature of the doctor in order to be valid.

A percentage of doctors are using also stamp but until nowadays is not necessary in order the prescription to be valid.

In every prescription there is a number up on the right corner. This number is compulsory for all prescriptions. The name of this number is op-code. It is an ascending number, which the pharmacists have to write when is receiving a prescription and simultaneously write it in the prescription book.

In Repeated prescriptions, the op-code is essential, for pharmacist in order to be able to find a specific prescription when the patient will visit again the pharmacy in order to receive the repeated medication. ^[50]

4.1 PRESCRIPTION PARAMETERS

Parameters that are noted for a typical medical prescription are described as follows: ^[48]

- Code of the recipe (written by pharmacist, op-code)
- Contact physician (telephone, address etc.)
- Daily dose
- Date of dispensing
- Date of prescription
- Name of patient
- Prescribed Drugs
- Signature of Doctor at the bottom (Stamp is not Necessary)
- Specialty of the doctor

From the above data it is possible to extract accurate information and conclusions, per insured patient, per pharmacist or per physician, per drug, per disease and a combination of the above information. Some examples of medical reports and economic interest can be produced, such as ^[48]:

- Frequency diseases in combination with specific profiles insured (age, sex, geographic region, etc.)
- Consumption of drugs per patient
- Drug consumption by age
- Prescription drugs per physician
- Performed prescriptions per pharmacist
- Possible associations of doctors - medical laboratories – pharmacists
- Statistical and historical data

The insurance fund acquires effective control capability - at the most detailed level - cost of insured hospital stays of government, which allows it to have a clear and complete picture. These data can provide some help in the intersection of the data such: ^[48]

- Prescriptions per drug on a weekly, monthly, quarterly, and annual basis
- Prescriptions per doctor on a weekly, monthly, quarterly, and annual basis
- Prescription per (department) clinic on a weekly, monthly, quarterly, and annual basis

- Prescriptions per patient weekly, monthly, quarterly, annually
- Prescription drug per category on a weekly, monthly, quarterly, and annual basis.

There is an example below (see Figure 1) that meets all the formalities including the op code.

Explanation of medicines on Figure 1.

- 1) Risperdal- RISPERIDON-atypical Antipsychotic- 2g Tablets one time per day. N.40- means 2 packets. Numbers illustrate the number of pills. A packet of Risperdal contains 20 pills.
- 2) Effexor-Venlafaxine n.56- doctor wrote number of pills, the pharmacist must calculate how many packets should give. Dosage is 1 pill per day
- 3) Debakin Chrono- Valproic acid 500 mg 1x2 = 1 pill in morning and one at night
- 4) Rivotril-clonazepam 2 mg – 180 pills, (6 packages) one pill in the morning one and half after 8 hours and one at night.

Numbers at the left side of prescriptions are showing how many packets the pharmacist had dispensed.

Figure 1: Example of Medical Prescription in Cyprus

Doctor's name, Specialty and personal informations

Op-code 4800

Δρ. ΧΡ. ΓΑΛΑΤΟΠΟΥΛΟΣ M.D.M.R.C. Psych (Αγγλίας) ΨΥΧΙΑΤΡΟΣ Αγ. Ζώνης 34, Ακρίτας Κώρτ Διαμ. 102 (1ος όροφος) Τηλ. 25364322, Φαξ: 25580347, Λεμεσός Φίλιππου Αντωνιάδη 3 Τηλ. 26932960, Πάφος	Dr. C. GALATOPOULOS M.D.M.R.C. Psych (UK) PSYCHIATRIST 34, Aylas Zonis Str., Akritas Court Flat. 102 (1st Floor) Tel. 25364322, Fax: 25580347, Limassol 3, Philippou Antoniadis Str., Tel. 26932960, Paphos
--	--

HMEP. DATE 11/5/11

ONOMA NAME *Γρηγόρης Ελευθερίου*

Name of patient

Drugs And Dose

- 2 - *Risperidol 2s tabs,*
1x1,
No 40
- 10 - *Effexor 9.2 37-85 caps,*
1x1,
No 50
- 5 - *Debakline chr. 500s ta,*
1x2,
No 120
- 6 - *Risperidol 2s tabs,*
1-1/2-1,
No 180

Doctor's Signature

4.2 OP-CODE AND PRESCRIPTION BOOK

Every Pharmacy should have different type of books that will record all the prescriptions that are coming to pharmacy. ^[50]

It is vital the update of the PB at the end of every day in order the pharmacy to be ready for any checking by MoH that is sending employees for checking without warning.

Prescription books are divided according to type of drugs. It is necessary to have different PB for repeated prescription and different for the other drugs.

Strong drugs, narcotics and psychotropic should be written at the back of the PB.

The prescription book must contain alphabetically the name of the patient, the date as well as the op-code. ^[50]

Op-code is an ascending number written by pharmacist at the upper right corner of every prescription. The op-code must be the same number as it is written on the prescription since it works like personal patient identification.

In conclusion it is necessary for RP since it is the only way to find from the pharmacy files the specific prescription of the patient. The patient that is leaving a repeated prescription in pharmacy next time that will visit pharmacy will say only his name and the pharmacist will find the name of patient in the PB as well as the op-code which is the "key" to find the specific prescription from box or prescription's files. ^[50]

4.3 REPEATED PRESCRIPTIONS

Prescription book is fundamental for repeated prescriptions. After receiving every single repeated prescription the pharmacist should update at the end of the day the PB and write alphabetically the name of the patient, the date of receiving the prescription (in order to know that in six months the prescription will not be valid) as well as the op-code.

By writing an ascending number it makes easier the job of pharmacist since when a patient will come to pharmacy for repeated medication, is saying his name and the pharmacist is finding the name of patient from PB and simultaneous is finding also the op-code of specific prescription. Then is opening the paper file or box of repeated prescriptions and finding the specific prescription from the op-code in order to see the medication.

It is compulsory in repeated prescriptions the pharmacist to write at the back of the prescription the date and number of packages or medication that the patient took in

order to know how many packages already took and when the prescription will be expired. ^[50]

In a repeated prescription there is no special form, the look of a repeated prescription is exactly the same as common prescription. The only difference is that pharmacist should have different PB for repeated prescriptions and different box or file that will save the prescription.

When a repeated prescription is coming to pharmacy, it is necessary the patient to take all the medication from the specific pharmacy. It is not possible to return a prescription or to make a photocopy. It is strictly prohibited by the MoH all the prescriptions must be original and any copy is not acceptable.

In conclusion it necessary if the repeated prescribed drugs are Narcotics or Psychotropic substances to write the prescription at the back of the PB, due to the fact that is making checking easier for the employees of MoH. ^[48, 50]

4.4 ANALYTICAL PRESCRIPTIONS

Pharmacist in Cyprus are not preparing something special but only some small preparations of mixing mass production medicinal products and not so often.

Analytical prescriptions are the prescriptions for prepared drugs that are prescribed by doctor and contain for example two different types of creams. In this case the pharmacist have to charge the patient for the both prices of creams and then charge also the patient for a new jar that will use for the preparation of the cream. The jar price is 2.0 EUR. The majority of analytical prescriptions are simple creams that the pharmacist in just using only spatula in order to mix the cream and prepare a homogenized mixture of the cream. Furthermore some other kind of analytical prescription is some syrups, antibiotics etc. that need to prepare it by adding of water and then shake it until the powder will become absolute liquid. ^[50]

Most frequently examples of analytical prescription is beclomethazone cream with panthenol, where the pharmacist is mixing the two creams in a new jar and placing a label on jar indicating the use. Another example is the preparation of syrup of antibiotics such as Azathromycin powder where the pharmacist is adding water in the syrup and is shaking until the antibiotic will become absolute liquid.

4.5 VALIDITY OF PRESCRIPTIONS

All prescription are valid for 6 months and must be stored for 2 years due to the fact that the Ministry of Health is coming for checking during the year any time without warning.^[50]

It is compulsory by MoH every prescription to contain the name of doctor as well the specialty, name of patient, date, daily dose and the drugs that are prescribed to be written by hand. At the bottom of every prescription must be always the signature of the doctor. Stamp is not necessary.

Pharmacist must charge the patient a fee for every prescription, which is 1.18 EUR^[50].

Every pharmacy must have files or boxes in order to record all the prescriptions that are coming to the pharmacy. According to the laws of MoH, every pharmacy must have different file or box for OTC, different for prescribed drugs and different for repeated prescription.^[50]

In addition every pharmacist when is receiving a prescription must write it in the Prescription book daily the date, the name of patient as well as the op-code.

Furthermore the prescriptions must be stored in boxes or files according to their type. For example when a patient is leaving a repeating prescription to a pharmacy the period for repeated prescriptions is maximum 6 months. It is not possible to take medicines from other pharmacy. Medicines of repeated prescriptions must be taken from the pharmacy that was taken for first time. Pharmacist cannot make a copy of the repeated prescription, give the medicines and return the original to the patient in order to be able to buy again prescribed medicines from another pharmacy. Prescription copies are not acceptable.^[50]

A patient can take all the boxes of repeated medicines at once so it's not necessary to come every time that ran out of medicines.^[50]

Lastly the pharmacist must be very concentrated in every prescription that is receiving in order to identify if the prescription contains all the parameters that are indicated by MoH due to the fact that in Cyprus common phenomenon of fake prescriptions.

Until nowadays there is no special method of identification authenticity of the prescription.

4.6 FAKE PRESCRIPTIONS

Unfortunately the phenomenon of fake prescription in Cyprus is not something new. There is no way to check the authentication of the prescription since all the prescriptions are in same form. It doesn't exist some way of identification of the original. ^[48, 55]

All pharmacies in Cyprus had at least one case that the prescription that they got was fake. Is extremely hard for pharmacist to understand if the prescription is original or not since these people with fake prescriptions are coming mostly the hours that exist work overload as a result the pharmacist does not have the time to check carefully the prescription. ^[55]

In addition there is no some type of paper that the prescriptions must have. Doctors are exclusively deciding the size the color of the paper as a result this is making even harder the job of pharmacist in order to identify the authentication.

Pharmaceutical federation has already suggest the complete change of medical prescriptions in parliament due to the fact that it will be beneficial to reduce the cases of fake prescriptions. Furthermore such a change will make pharmacist surer considering the authentication of the prescription, will save time from checking every single prescription and also reduce the possibilities of medical errors. ^[55]

5. ABROAD MEDICAL PRESCRIPTIONS.

CROSS BORDER PRESCRIPTIONS

Prescriptions that are not from Cyprus or Greece are acceptable for all type of drugs only if the origin of the prescription is from European Union Country.

Until now there is not specific method to identify if the prescription is original or fake. The pharmacist must judge if the abroad prescription is original from the typical signs if contains doctor's signature etc. In case that the prescription is from European Country and the drugs that are prescribed are serious like (Opioids, Hypnotics/anxiolytics/sedatives, hormones etc.) the majority of pharmacist are not taking the responsibility to dispense serious drugs from an abroad prescription since they cannot identify if the prescription is 100.0 % original or a good fake copy. In brief the most of Cypriot pharmacist are never trusting the abroad prescriptions since in case

of fake prescription can face serious punishment from the MoH like loss of license or prison. ^[50].

In Cyprus when a pharmacist is taking the responsibility and will dispense drugs that the origin of prescription is not from Cyprus but from an EU country member there are some elements that are illustrating to pharmacist how to identify the authenticity of a cross-border prescription. These elements are: ^[51]

- I. Identification of patient (name, date of birth, gender, health card number, national id, phone number)
- II. Identification of Prescriber (name, ID/License number, address, international phone number, email, and signature. Additionally it is possible the prescriber to provide a blank field was can write note for the pharmacist.)
- III. Prescribed Medication (brand name, active substance, pharmaceutical form, strength, indication, duration of treatment, dosage.)
- IV. Authentication and validity of Prescription must contain the issue date and place of prescription as well as the validity in months and special authentication signal.
- V. ID of dispenser (name, id/license number, name of pharmacy, address, phone number as well as signature and date of dissension) ^[51]

Below is present an example which was suggested European Prescription by PGEU after serious and professional research for cross-border prescriptions. ^[51]

Figure 2. Cross Border Prescription illustration ^[51]

Illustration of a PGEU suggested European prescription in the context of cross-border care

(I) **Patient** Name: Date of birth: DD/MM/YYYY Gender
 Address, telephone: F M
 ID/Health Card No.:

(II) **Prescriber** Name: ID/License No.: If applicable:
 Address: Digital Signature
 Phone No.: (country code + number) Email:

(III) **Remarks to other HCP:** (III)

Medication Prescribed	Medication Dispensed
INN: Brand: Strength: No. of Items: Form: Indication: Dosage: Duration of treatment: How to take: Number of prescription repeats (if applicable):	Brand name: Form: Strength: No. of Items: How to take: Additional remarks:

Issuing Date DD/MM/YYYY **Issuing Place** City, Country **Validity Period** In months **Authentication feature**


Pharmacist Name: ID/License No.: If applicable:
 Pharmacy name and address: Digital Signature
 Phone No.: (country code + number) Email:

Dispensing Date DD/MM/YYYY

6. E-PRESCRIBING AND E-HEALTH

The rapid progress of information and telecommunication leaves its mark in numerous fields of science, among the medical ones.

The system introduced to the Cyprus Health System records every concerned and personal password at the system automatically and afterwards it creates a folder with every recorded medical history. This unique code can access the folder the medical consent of the patient. This feature provides a means of communication between the medical and paramedical staff, involved in the care of the individual patient. Also, through the medical records can gain information on diagnosis, treatments, recording patient progress etc. in order to avoid errors and delays in the prevention and diagnosis of diseases. This code can be changed whenever it is desired by the beneficiary in order to ensure the confidentiality of medical history. According to the patient's care, his medical record is the benchmark of reference in order to acquire a complete picture of the health status of the concerned person. Upon completion of the medical care of a patient, the medical record is updated with new emerged data. The information contained in the medical record may have future use, whether to treat the patient or for research purposes. ^[47]

Electronic prescribing could be beneficial since is a method of allows to prescriber to send directly the prescription electronically in pharmacy saving time and money but such a system doesn't exist in Cyprus yet. ^[33]

Many technological innovations invade our everyday lives are related to medicine in the form of new therapeutic methods and finding modern methods of early diagnosis. In these innovations medical information systems are included, helping the operational and effective archiving of medical records of patients, with the ultimate aim of creating a beneficiary Health system. The European Union is promoting the creation of an electronic health record system to support information sharing and standardization and the development of exchange networks of information, in order to coordinate actions. An additional objective is to provide health services online with supported services related to: information healthy living, disease prevention, development of telecounseling, e-prescribing, referral and reimbursement of medical expenses. ^[47]

In summary, the term "e-health" covers a wide range of tools based on information and communication technologies aimed at better prevention rate, diagnosis, treatment, monitoring and management of the patient's health and lifestyle. That is, an

electronic file of the patient, an evolving concept with the primary purpose of the long-term collection of health information for future and predictive use. The patient's right to confidentiality of its personal data is not weakened due to the use of electronic means. On the contrary, setting ethical or legal procedures and criteria for the electronic collection, the processing and handling of sensitive personal data to potential users or administrators of health data, becomes mandatory. ^[47]

In the past recent years, the volume of information related to the medical care of the patient has significantly increased. This is due to the incorporation of a large number of laboratory and paramedical examinations in the patient's record. Additionally, the task of doctors and nurses are constantly increasing and the need to safeguard the medical records of patients becomes more urgent than ever. The mainstream medical records of patients that are based on recording patient data on paper, fail to hold all this large volume of information. As a result, data is been lost and generally there is no temporal correlation of the various examinations with the complete patient's medical history. Thus, it appears an urgent need to create an electronic record, which will contain all the information gathered in the medical report effectively and furthermore exploits the potential of new technologies to provide more qualitative health care to the patient. ^[47]

7. PRESCRIPTION ERRORS AND MEDICAL ERRORS

Pharmacist is playing an elite role in the health of the patient as well as the good information about the medication as well as the correct use of drugs. In Cyprus it happened many times the wrong medication by doctor as a result the pharmacist who didn't recognize the mistake was also responsible for the adverse drug reaction or the health consequences that happened to patient. ^[50]

It is well know that fact that doctors may make mistake, due to fatigue or work overload or momentum speed. An example that is exist clearly in my mind was with personal experience of my mother who is pharmacist from 1989, a woman around 30 years old came to pharmacy with a prescription containing DIOVAN (Valsartan) without informing her doctor that she is in first month of pregnancy. ^[55]

She denied to provide the medication and she called immediately the doctor to inform the error in order to change the medication. ^[55] Prescription error can occur also when the doctor forgot to write any essential elements of the prescription like name

patient, or daily dose or signature. In this case the prescription is automatically invalid and the pharmacist will not dispense any medication.

The negligence, improper behavior is even more common. The regulations of the Medical Professional Conduct of the Cyprus Constitution, chapter "General Regulations of practice " that "required as the doctor performs his work conscientiously, humanitarian, according to medical ethics and institutional ". Any act or omission of the physician is contrary to duty and draws against penalties commensurate with the seriousness of the misconduct, according to the relevant provisions of the Code to practice medicine and to subscribe Practitioners Act." For Cyprus there are no official statistics. ^[49].

A physician is criminally liable if his acts or omissions violate the relevant provisions of the Criminal Code. Article 210 provides imprisonment up to four years and / or a fine up to € 4.272,00 EUR when someone causes the death of another person due to reckless, careless or reckless act or conduct. Specifically, that whoever make medical or surgical treatment to a person whose assumed hospitalization manner is thoughtless, hasty or negligent as to endanger a human's life or to be likely to cause bodily injury, the subject to imprisonment is not exceeding two years and / or a fine of up to € 2.563,00 EUR. ^[49]

When a convention between the patient and physician for a treatment or hospitalization is to be presented by the patient, theoretically at least, their relationship is governed by the express and implied terms of the contract. In practice, there are few differences between the duties owed by a private physician contracted to the patient and those who must a doctor of the hospital hospice patient, without a contract. Every physician has a duty to their patients to exercise reasonable care and diligence in performing their duties properly. In case of arising liability from contractual obligation, the Court will make an interpretation of the contract and will come up to the explicit or implicit terms, as applied in an appropriate way. ^[49]

The opinion of the court's decision is based upon the following points which are and must be the shield of doctors against any unfounded, and therefore useless, conductors. ^[49]

- Failed the prosecution to prove beyond reasonable doubt that the particular method is unsuitable method and therefore incorrect.
- Failed to connect the undesirable result with a surgery.

- The patient did not follow to the end the indicated treatment, i.e. not completed and visited several other doctors who obviously intervene therapeutically. The treatment for both parties and their sacred relationship can and should be checked with legislation, regulations and other ways to safeguard the rights and tasks of both physicians and patients.

The basic principles, which are established and accepted by the European and Anglo-American Jurisprudence, assist in the characterization of a medical behavior as negligent, but also protect doctors from hasty and sometimes unjust or malicious claims of their patients and relatives. ^[49]

- No medical liability in case of damage of the patient, when the energy of the physician is not due to culpable ignorance or negligence.

- There is no medical liability when a doctor has conscientiously diagnosed and followed the proper medication, according to the established rules of medical science.

- No responsibilities for diagnostic or treatment errors when errors are not due to ignorance or omission of the necessary medical knowledge.

- The risk of accidental or unintentional errors lies with the physician patient.

Typical is the premise of the Swiss Supreme Court from 1927, as well as the established view of Imperial Courts, according in which the use the services of doctors and other means without taking certain risks in terms of patient. ^[49]

8. PRESCRIPTION PRESCRIBERS AND DRUG STORES

In Cyprus only doctors can prescribe drugs and write prescriptions. The pharmacist is not allowed to write any kind prescription. Veterinary Doctors are able to prescribe medication for animal but the pharmacist is not allowed to dispense medication for animals. The MoH strictly prohibits it. Drugs for animals cannot be dispensed from normal pharmacy. Veterinary prescriptions are allowed only in animal clinics or in special centers for animal. ^[53]

Recent discussions in the parliament of Cyprus says that perhaps in future the pharmacist will be also able to prescribe some type of medication but until today nothing is official and valid.

People in Cyprus can supply medication only from pharmacy in state hospital or private community pharmacy. A matter of considerable controversy nowadays is the future drug selling in supermarkets or in kiosks. Today in Cyprus the only drugs that are available out of pharmacy is PANADOL, some kind of herbal tea and some supplementary vitamins. All pharmacists in Cyprus are against the drug selling out of Pharmacies since the drug use without the information and the indicated from pharmacist can cause fatal events. Another reason against drug stores by pharmacists is the losing of profit due to the existence of drugs or supplementary vitamins out from pharmacies in special offers. [53]

To conclude, Pharmacist Federation is demanding from the government to not legalize the drug selling, out of pharmacy, due to the fact that pharmacist profession will fade and also the possibilities of drug misuse will be dramatically increased. [53]

9. OBLIGATIONS OF DOCTORS AND PHARMACIST ACCORDING MEDICAL PRESCRIPTIONS

9.1 OBLIGATIONS OF DOCTORS

Doctors must be always reliable with the patients explaining the reason of pharmacotherapy. They should always beware during diagnostic procedures and choosing the correct medication. Only doctors are able to prescribe medication including veterinary doctors.

In Cyprus all doctors must follow some general formula according prescriptions provided by the MoH. [49]

Prescription paper form, size and color are chosen by doctors. Until today there is not any obligatory form of prescription that the doctors must follow.

According MoH all prescribers should contain personal data at the top of the prescription such as specialty e.g. cardiologist, telephone number, email, address

In addition all prescriptions must contain name of the patient and date. In the middle of every prescription doctors must handwrite the empirical name of the drugs as well as the daily dose. At the bottom of every prescription is necessary the signature of the doctor. Stamp is not compulsory.

9.2 OBLICATIONS OF PHARMACIST

On the other hand pharmacist is having exclusive role. Dispensing of drugs can be fatal if it is not correct. When a pharmacist is receiving a prescription must first of all check the validity, if something is missing and then ask the patient some basic but fundamental type of questions e.g. if he have any allergy, pregnancy, etc. Furthermore pharmacist must indicates the daily dose, make the patient understand the rational use of pharmacotherapy and mention the correct use of the drugs. It is also possible to give to patient some personal card that include telephone number in order the patient to call if he has any questions or misunderstanding. ^[49]

In the end, every pharmacist in case of not understanding the prescription due to bad handwriting of doctor, the pharmacist should call doctor in order to specify the correct pharmacotherapy.

Last thing that the pharmacist is necessary to do is to write the op-code to all the prescriptions that he received the specific day.

In the end of every day it is required the record of all prescriptions as well as to update the PB. Storage of prescription is obligatory in files or boxes for 2 years. ^[49]

10. DRUG STORAGE AND PHARMACEUTICAL WAREHOUSE

The biggest drug pharmaceutical warehouse in Cyprus is called KEDIFAP which mean connected pharmacies. The company was founded in 1994 by 30 pharmacist in 2004. They create a huge warehouse in Limassol where the drugs are stored in special conditions and the MoH recognized this company for official drugs selling to all licensed pharmacies and hospitals. In 2009 it was expansion of the company in Nicosia and nowadays covered all Greek Cyprus. ^[11] Today is the largest diversified Pharmaceutical in the country, drawing on the expertise of human resources and technology, combined with the daily cooperation with partners and suppliers.

Every pharmacy member has a special electronic program that allows electronic ordering of drugs via computer. Delivery of products is available two times daily and the drugs are coming in special boxes where include the statement of the order. Boxes of delivery are design with special plastic material that protects the drugs from dust or other environmental factors during delivery time. The delivery cars of the company

include also refrigerator for drugs need special temperature. The company is providing high quality delivery as well as excellent cooperation with all pharmacy members.

The MoH regulates prices of the drugs. All products contain fixed price. ^[11]

It is strictly prohibited to increase or reduce the prices of drugs. On the other hand some pharmacist could make some special offers to some group of patients like relatives or good customers but the pharmacist is losing the profit of selling. MoH indicates same prices for all people, no special offers are acceptable but even though is not possible to control if a pharmacist in increasing or reducing the prices. The only method of identification of such a kind of problems is only when a patient will complain to the MoH and approves that has been stolen due to illegal increase of prices.

Drugs are stored in Pharmacies in big drawers where are protected by environmental factors such as light or dust. The majority of pharmacies in Cyprus have large amount of cosmetics like creams, make ups, nail lacquers, perfumes on shelves and behind the bench they have the drawers that contains the drugs. ^[11]

Narcotics and psychotropic drugs are not necessary to be locked but it is essential to be all together in a different drawer and not with other different type of drugs. Important is also that must not be visible by patients entering the pharmacy.

Finally the MoH is daily informed from pharmaceutical warehouse what medicines were delivered to every pharmacy in Cyprus. In case that the employees MoH are coming for checking and they always hold a statement of what drugs arrived in the exact pharmacy.

They are checking if the pharmacist is keeping daily updates the PB as well as the existing drugs in Pharmacy. ^[11]

For example when a pharmacist is ordering from pharmaceutical warehouse 10 packages of strong drugs like dihydro-codeine, the employees of MoH will check how many packages are available in pharmacy and if exist 6 packages from 10 the pharmacist must show 4 prescriptions. In case of missing some prescription or package of drugs the pharmacist must pay penalty or in some cases if the missing of drugs or prescriptions are serious in quantity then is possible also the pharmacist lose his license or face prison by the court of law. ^[11]

11. SUMMARY OF CYPRIOT MEDICAL PRESCRIPTIONS

11.1 SUMMARY TABLE

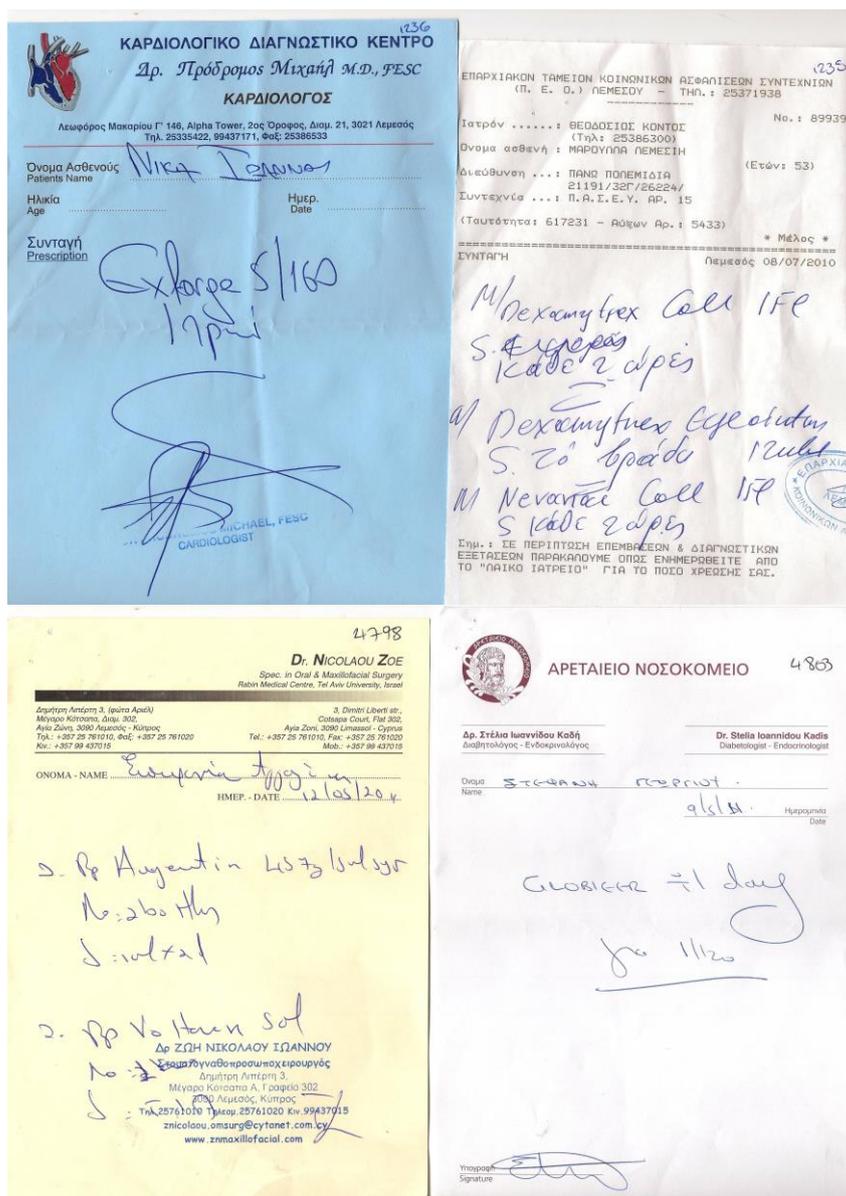
MEDICAL PRESCRIPTION INFORMATIONS	EXPLANATION OF MEDICAL PRESCRIPTIONS	SPECIAL INFORMATION
Types of prescriptions	Common Repeated Analytical	
Analytical prescriptions	For prepared drugs	Mostly mixing creams or preparing syrups.
Forms of prescriptions	None	There is no special form.
Veterinary prescriptions in pharmacy	Not possible	Strictly prohibited dispensing of veterinary drugs from pharmacy.
Electronic prescriptions	Not exist	Until nowadays all prescriptions must be handwritten.
Repeated prescriptions	Available	Date, name of the patient, op-code, total number of packages are crucial. Daily record in PB of all repeated prescriptions.
Signature of doctor	Necessary	Prescription validity parameter.
Stamp in prescriptions	Not necessary	Some doctors are using stamp.
Validity	6 months Handwritten only	All kind of MP incl. repeated, starting from day of prescribing. Patient can take all drugs at once.
Habituate Drugs	No special form of prescription	Is used common prescription.
Maximum number of different drugs	Unlimited	For all types of prescriptions.

Maximum number of prescribed packages	Unlimited	For all types of prescriptions.
Generic prescribing	Available	Acc. doctor's decision. Pharmacist can choose alone the concrete brand name, only with patient's agreement.
Generic substitution	Possible	Pharmacist can choose alone the concrete brand name, only with patient's agreement.
Extra fee per prescription	1.18 EUR	This fee is given for pharmacist.
Prescription book	Necessary	For daily record of all prescriptions (name of patient and the op-code). There are prescription books for repeated prescriptions and different for all other drugs. Strong habituate must be written at the back of PB.
Op-code	Necessary	An ascending number that is written at the right top of prescription, it works as ID.
Copy prescriptions	It is prohibited	Patients buy their medicines from the pharmacy that they left their repeated prescription.
Storage of prescriptions in pharmacy	2 years	For all types of prescriptions. Repeated prescriptions must be in different box as common.
Compensation by insurance companies	None	Patients pay all drugs and the coverage system is returning part or whole amount of money.

11.2 EXAMPLES OF PRESCRIPTIONS IN CYPRUS

The prescriptions on Figure 3 are all different in the form, size and color of paper. Three of them contain stamp but one of them not. All of them are valid since all the contain name of doctor. Name of patient, date, prescribed drugs and dose and all of the contain signature of the doctor. [50]

Figure 3. EXAMPLE OF DIFFERENT PRESCRIPTIONS



Explanation of medicines present in Figure 3.

Prescription up on the left: Exforge - amlodipine/valsartan 5/160mg, one pill in the morning.

Prescription up on the right: Dexamyltrex- dexamethasone and gentamycin eye drops- 1 drop every 2 hours, Dexamyltrex eye ointment – use at night, Nevanac- nepafenac 2 drops every 2 hours

Prescription down on the left: Syrup-Augmentin- Amoxicillin and Clavulanic acid 457 mg are in 5ml, No.2-means the number of jars, so 2 bottles, and the dosage in 10ml every 12hours.

Voltaren- diclofenac solution, 1 piece, t.i.d means 1 dose every 8 hours.

Prescription down on the right: Globifere-Fe 1pill per day. 1/12 means for 1 month.

12. CONCLUSION

To conclude, the secondary aim of this thesis is to find out that the Health system in Cyprus is distinguished into the public and the private sector. The public sector provides several health services, free of charge or at a low participation. In contrary, the provision of care from private hospitals requires a specific sum of money by the patient, whereas in a few cases, a portion of the overall debt is paid from the insurance fund. The Health system of Cyprus has several phenomena inequality and non-accessibility mainly from the economically weaker population groups.

The system of Cyprus is a unique arrangement in the European Union. The modern economic and social needs require the reshaping of the Health system, in order to eliminate unpleasant practices and streamline the provided requirements.

The Summary Table at chapter 11.1 provides all the basic and significant informations about medical prescriptions in Cyprus. This table is the "spinal cord" of this diploma thesis since is summarizing clearly the current situation.

In the future plans of Ministry of Health is the complete redesign of entire Health System in a direction of electronic services for all the parts of Health system chain including doctors, pharmacists and insured patients.

Additionally prescription books or files will not exist anymore since everything will be record in computer system, which will be directly connected with MoH where there will be no need for checking visits since everything will be checked via internal computer system. These changes will eliminate the phenomenon of fake prescription as well as the misunderstanding due to bad handwriting letters.

Medical prescriptions rules and forms will complete change since until today there is no special way of identification of authenticity and the fact that all prescriptions are in common form are increasing the possibilities of mistakes.

In conclusion, Government of Cyprus declares in the beginning of 2014 that handwritten medical prescriptions will not exist anymore since in 2016 Cyprus Health System will change completely. Prescriptions will be electronic and containing active substances and not empirical names of the drugs so the pharmacist will be responsible of providing the best available drug. ^[55]

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ABSTRACT
MEDICAL PRESCRIPTIONS IN CYPRUS

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Aim of diploma thesis is to get:

- current knowledge about medical prescriptions (MP) in Cyprus and rules of their use
- their basic division according their kinds, formal look, practical handle, payment
- knowledge of the current Health system of Cyprus

Results:

The Health system of Cyprus is a unique arrangement in the EU since is a simultaneous participation of public and the private sector, which has many phenomena of inequality and non-accessibility mainly from the economically weaker. In the future plans of Ministry of Health is the complete redesign of entire Health System in a direction of electronic services for all the parts of health system chain including doctors, pharmacists and insured patients.

The basic and significant informations about medical prescriptions in Cyprus according aim of diploma thesis are demonstrated in the Summary Table at chapter 11.

All prescriptions in Cyprus are in common form for all type of drugs and there is no rule for size and color of the paper. Pharmacist is checking the signature of the doctor as well as name of the patient and date. These three are the essential factors that are making the prescription valid. Patients must pay all medicines directly to pharmacist and then the coverage system is returning a part or whole prices of medicines.

Conclusion:

In future, prescriptions in Cyprus will be electronic and containing active substances and not empirical names of the drugs so the pharmacist will be responsible of providing the best available drug.

ABSTRAKT

LÉKAŘSKÉ PŘEDPISY NA KYPRU

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Cíl práce:

Zpracovat základní materiály související s lékařskými předpisy a pravidly jejich používání na Kypru. Vytvořit přehled podle jejich druhů, formální stránky, praktického zacházení s nimi, jejich úhrady. Přiblížit současný systém zdravotní péče na Kypru.

Výsledky:

Zdravotní systém na Kypru má jedinečné uspořádání v Evropské unii, neboť zde současné působení veřejného a soukromého sektoru přináší nerovnost a omezenou dostupnost zdravotní péče pro mnohé členy společnosti. Do budoucna ministerstvo zdravotnictví plánuje kompletní změnu celého zdravotnického systému ve směru elektronizace pro veškeré složky zdravotnického systému, včetně lékařů, lékárníků a pojištěnců.

V souladu s hlavním cílem práce jsou základní a nejdůležitější informace o lékařských předpisech na Kypru soustředěny v souhrnné tabulce v kap. 11.

Lékařské předpisy na Kypru jsou shodné pro všechny typy léčivých přípravků, neexistují zde téměř žádná pravidla ohledně jejich formy, velikosti či barvy použitého papíru. Lékárník je povinen zkontrolovat podpis lékaře, jméno pacienta a datum vystavení předpisu, což jsou tři základní faktory, nezbytné pro platnost předpisu. Pacient zaplatí předepsané léčivé přípravky přímo v lékárně a dodatečně je mu vrácena část nebo plná částka pojišťovnou.

Závěr:

V blízké budoucnosti budou na Kypru používány jen elektronické lékařské předpisy obsahující účinnou látku a nikoliv empirické označení léčivého přípravku, což zvýší odpovědnost lékárníka za poskytnutí nejvhodnějšího léčivého přípravku.