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**Leonardo da Vinci**

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European Market**

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**Report on educational system and the role of  
Family Physicians in the field of health  
promotion and disease prevention**

**2009**

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## **1. Abstract**

Prevention represents one of the key principles of family medicine, and the importance of family physicians (FP) in health promotion and disease prevention has been accepted since 2002. In order to further establish the specific role of the FP in the area of preventive health care, a comprehensive analysis of the educational activities, practical training, and position of FP in the health care system, according to expert opinions, was obtained from the four European countries: Greece, Lithuania, Poland, and UK, under the Leonardo da Vinci Project (Bridging the gap of general practitioners' competence on European Market, Project n° 2008-1-PL1-LEO05-02080). The report from each country is based on detailed evaluation of the: Medical Studies Curricula, Postgraduate Training Curricula, Specialty Curricula, Survey Results, and Legal Regulations Concerning the Family Doctors' Tasks and Obligations Relating to Health Promotion and Disease Prevention.

The results of the analysis of training program, focusing on the FP's role in preventive health care, indicate that the FP's competences should be achieved during the academic training program and specialization process, and then should be perfected via modern, professional medical education, in collaboration with community resources, in the atmosphere of international exchange of learning and experience.

This review presents a combined report from these four countries, including similarities and differences between them, related to specific historical, political, socio-economical, and medical circumstances. It also places Poland on the European map of family medicine, as a dynamically developing specialty.

## **2. Introduction – the role of health promotion and disease prevention in primary health care, contents of the report, and methodology used to create this review**

Prevention is a “corner stone” of family medicine (FM), and the role of family physicians (FP) in health promotion and disease prevention has been well established by WONCA since 2002. In this regard, the FP taking care of a specific population directs his/her professional efforts predominantly to the healthy members of the health care plan, who may be at risk for certain diseases. In this capacity, the FP is obligated to schedule and implement preventive actions, which have been proven safe and effective. This includes long-term collection and processing of patients’ data, allowing creation of a comprehensive database of the local community. Thanks to the demographic and epidemiological information, the medical and psychological condition as well as social and economic patient’s status can be established.

This kind of information is invaluable for a detection of patients, for whom targeted interventions, such as specific preventive strategies can be particularly beneficial. Polish FP should be particularly motivated to introduce this kind of preventive care to their assigned patient population (according to “*per capita*” remuneration system), since it practically means, that in contrast to the “*fee for service*” system, keeping patients in good health may in consequence decrease the FP’s workload.

Health can be perceived from an individual or community perspective, in which both health potential or health capital are essential. Health potential means maintaining the body homeostasis and resisting diseases. It can be augmented by lifestyle modification and creating healthy environment at work and at home. In the field of preventive care, the FP conducts an individual risk assessment, gives advice, provides necessary treatment, and applies appropriate screening and testing procedures. The FP should also be instrumental in preventive campaigns conducted by schools, and community organizations.

The methodology applied to investigate topics related to preventive medicine utilizes some basic terms related to epidemiology. FPs should receive a formal training, to be capable of using preventive strategies in their daily practice. Prevention encompasses primary and secondary prevention. The primary prevention is related to a decreased exposure to known and avoidable risk factors, by taking action to diminish the cause of disease in an individual or in a population before it arises. The secondary prevention is related to an action taken against the course of disease by its early detection and treatment, preventing its development or shortening its course. Health promotion relates to strengthening of the specific health potential via education and creation of an environment, which is conducive to good health. Risk factors represent measurable features, associated with an increased probability of disease occurrence in the future.

This combined report presents a comprehensive analysis of Undergraduate, Postgraduate and Specialty Curricula, including a description of the education and training process as well as the specific role of FP in health care systems of the four countries: Greece, Lithuania, Poland, and UK.

### **3. The Role of the Family Physician in disease prevention and health promotion, according to the reports from Greece, Lithuania, Poland, and United Kingdom**

Over the past decade, European General Practitioners/Family Physicians (GP/FP) have developed a new definition of General Practice/Family Medicine (GP/FM), as a specialty that is related to environmental and socio-economical changes, including unemployment, immigration, effects of media, modern technology, and poverty on psycho-physical functioning of the human organism. Therefore, it is necessary for the GP/FP to acquire knowledge related to basic concepts of health, quality of life, models of diseases, prevention of diseases, promotion of health and risk factors management, in the large spectrum of primary care practice.

The GP/FP works in a given patient population for a long period of time, creating relationships with his/her patients. In general, attributes of GP/FM include medical management of the diseases, continuity of care, holistic model of the medical services delivery, disease prevention and health promotion, cooperation with community resources, collaboration with specialists, and coordination of patient care. Every country has developed its own, specific model of GP/FP performance, with an emphasis on preventive health care. A comparative analysis, based on the recent reports from Greece, Lithuania, Poland, and UK is presented below.

1. The Greek GP/FP working in public or in private sector is not particularly motivated to take over programs of health promotion and disease prevention, since there is no additional compensation for it. The only covered preventive services include vaccinations, risk factors assessment, and screening tests. GP/FP can be involved in cooperation with other medical professionals, teachers, and community authorities, in the area of healthy lifestyle promotion.

2. In Lithuania, like in other Eastern European countries post the World War II, the primary health care (PHC) system was centralized and oriented on specialized and hospital based medical care. After the reform in PHC, the model of the FP as a gate-keeper was introduced, with reorientation of the FP/GP role towards health promotion and disease prevention.

3. In Poland, the gate-keeper model of FP is also applicable. In this capacity, FP/GPs have been involved in cooperation with local health care teams (including nurses, social workers, and specialty

consultants) and organizations related to FM, such as the local government, schools, the Department of Public Health, and patient advocacy groups.

4. In the United Kingdom, the GPs' role in health promotion and disease prevention includes a holistic approach to the patient and his or her family, focusing on promoting health and wellbeing. Also, it is crucial for the GP to collaborate with other members of the primary healthcare team, promoting health and coordinating the patient's care. In addition, GP plays the role of patient's advocate, taking partial responsibility for an individual patient, her or his family.

#### **4. Educational system of the Family Physician in the area of disease prevention and health promotion, according to the reports from Greece, Lithuania, Poland, and United Kingdom**

After establishing the GP/FM as a new specialty, each country has developed a specific model of GP/FP education and training, with focus on preventive care. The report from each country is based on evaluation of the: Medical Studies Curricula, Postgraduate Training Curricula, Specialty Curricula, the Survey Results, and Legal Regulations Concerning the Family Doctors' Tasks and Obligations Relating to Health Promotion and Disease Prevention. An evaluation, considering the above components, based on the reports from Greece, Lithuania, Poland, and UK is presented below.

1. In Greece, an analysis of the Medical Studies Curricula revealed that during the course of medical school, students are supposed to learn the principles of GP/FM. However, only a few courses related to public health services, environmental health, workplace safety occupational health, and health policies (such as: "Preventive Psychiatry", "Social and Preventive Medicine", "Hygiene and Safety at Workplace", "Epidemiological Research Planning" or "Environment and Health") are being offered to them. Interestingly, over the last few years, some programs, including research methodology in PHC and GP/FM as well as MS or PhD degrees have been developed, as a part of the Postgraduate Training Curricula. An analysis of Specialty Curricula has shown that the specific training scheme starts with a 3 months period in primary care issues and promotion of health, and then follows principles of disease prevention in COPD, diabetes mellitus, vaccinations, and cancer.

The National Program of Vaccinations and smoking cessation allows practical application of epidemiology in the community. An evaluation of Survey Results, related to the competences on disease prevention and health promotion, acquired by medical students and residents, revealed that the highest score was for the prevention of cardiovascular disease, arterial hypertension, dyslipidemia, breast, cervical, and prostate cancer. An analysis of Legal Regulations Concerning the Family Doctors' Tasks and Obligations relating to Health Promotion and Disease Prevention revealed that the GP/FP is obligated to perform preventive medical practice and health education, to conduct

epidemiologic research, and to educate people on family planning issues. In general, the National Policy for Public Health is focused on programs for smoking cessation, drug abuse, obesity, cardiovascular disease risk factors, and cancer. However, in reality, the GP/FP has to individually apply a lot of preventive health care services in a daily practice. Obstacles to implementation of national programs in health promotion include a large workload of practice, lack of incentives and poor support system.

2. In Lithuania, similar to other Eastern European countries, to assure proper training in family medicine (FM), the new academic undergraduate and residency programs have been developed. The main document describing functions, competencies and responsibilities of family physicians in Lithuania focuses on FP/GPs competencies in: prevention of diseases, management of risk factors for diseases, principles of healthy life style, methods of health education, principles of occupational health, prevention of infectious diseases, cancer, and cardiovascular diseases (according to European guidelines on cardiovascular disease prevention). Module of FM during undergraduate studies is based on problem oriented holistic approach to health concerns encountered in clinical practice (such as chest pain, chronic fever, communication and counseling skills, and palliative care). During the postgraduate studies, there is course in preventive medicine, introducing the basic skills in assessment lifestyle habits and non-communicable disease risk factors management. The department of FM offers a continuous medical education course: "Control of chronic non-communicable diseases in family practice" that addresses prevention, early diagnosis and management of diabetes mellitus, arterial hypertension, and cardiovascular diseases at the PHC level.

3. In Poland, the FM courses are conducted mostly at the final year of medical studies, and more than 50% of the instruction time is spent in FP practices, mostly in small groups. The "Undergraduate Curriculum for Family Medicine", developed in 1999, indicated the knowledge and skills in the area of health promotion and disease prevention, with emphasis on teaching the methods of solving social problems, such as alcohol and substance abuse, tobacco smoking, and family violence. Postgraduate Training Curriculum contains courses, which provide general knowledge of the prevention of cardiovascular, respiratory and digestive system diseases as well as lectures on AIDS prevention, interpretation of glycaemia, arterial blood pressure and skills of prostate's disease evaluation. Partial postgraduate studies in paediatrics, gynaecology and obstetrics, and in FM include prevention of the diseases, which are the most frequent causes of patients' visits. In addition, the FM curriculum introduces the prevention of ear inflammation, hearing disorders, contagious diseases, and sight disorders.

The FM curriculum also contains some basic principles of cooperation with the health care team and the organizations related to FM, such as the local government, schools, and the Department of Public Health. The FM specialty (four years) has been offered to physicians, including education and

training programs (rotations in internal medicine, paediatrics, gynaecology and obstetrics) as well as the instruction in disease prevention, and problem solving skills. In addition, the specialty curriculum contains mandatory courses organized by the Family Doctor Education Centres (OKLR). An introductory course: "Care of Special Patient Groups" addresses oncology topics, and the "Public Health" course discusses matters of health promotion and disease prevention, based on National Health Programme, international programmes (WHO, EU), central government's health policy, and local community health care programmes. A survey on the evaluation of the competences acquired as a result of the curriculum completion by students and residents revealed that the highest evaluations were given for smoking and substance abuse counteracting, as well as the prevention of cardiovascular disease.

4. In the United Kingdom, an analysis of General Practitioners' (GPs') training programme, developed by the University of Sheffield, revealed that the GP's skills and competences in health promotion and disease prevention should be achieved during the specialization process. In particular, some important patient-oriented skills that need to be learned by GPs include: understanding of the patient's expectations, (considering social and cultural aspects of their lives), helping the patient to comprehend work-life balance, communicating health-related risk to the patient, promoting health on an individual basis, during the consultation, negotiating medical management, and empowering patients to look after their own health. Problem-solving skills need to be applied in both clinical practice and in evaluating scientific evidence, related to the individual patient's risk factors, and to the application of basic statistical techniques, and screening methods. Important competences of GPs include also aiming at a holistic approach to the patient and his or her family, promoting health and wellbeing (by considering the patient's personality, family, physical and social surroundings). Also, it is crucial for the GP to collaborate with other members of the primary healthcare team. In addition, the GP should have a working knowledge of the interrelationship between health and social care, including the impact of housing, employment, poverty, genetics, ethnicity and education on an individual and a local community's health.

## 5. Conclusions and Recommendations

In summary, it is worth mentioning that the definition by Leeuwenhors related to professional activity of family physicians has already emphasized prevention. Based on the current analysis of the medical education and training curricula, and on the legal regulations, within the scope covered by the reports from the four European countries, the following **conclusions and recommendations** have been created:

1. designing training programs related to family medicine/general practice, and focusing on health promotion and disease prevention represent a priority; in addition, it is important to



take into account the continuity of instruction throughout the undergraduate and postgraduate training, in combination with the contents of other specialty courses (e.g.: in cardiology, oncology, or endocrinology),

2. it is essential to share knowledge and experience between the medical centres, in which preventive care is being provided, including academic as well as other training facilities for family doctors, in both the EU and non-EU countries,
3. learning of the practical preventive skills and "vigilant" attitudes, necessary for safe and efficient primary preventive health care delivery, should be focused on early diagnosis and effective screening procedures,
4. medical professionalism in the field of health promotion and disease prevention should be taught by "learning from a master", or in small groups, using modern methods, and providing feedback and evaluation of students' and residents' progress,
5. at a level of the health care system, it is essential to promote the role of family physician as a "gate-keeper", who coordinates and assures continuity of patient care, and focuses on health promotion and disease prevention in an economical way,
6. planning of the health promotion and disease prevention programs should be preceded by evaluation of the family physician's time availability, interests, technical capabilities, and motivation; family physicians should be financially compensated for this part of their medical practice.
7. family physician should be encouraged to actively participate in organizing and implementing of the health promotion and disease prevention initiatives in his/her local community.

References (available at each source report)

## 6. Summary of the outcomes in Greek

### Συμπεράσματα και προτάσεις

1. Η ανάλυση των προγραμμάτων σπουδών των επτά ιατρικών σχολών καθώς και η περιγραφή της ισχύουσας νομοθεσίας, των εγκυκλίων και γενικά του νομοθετικού πλαισίου που ορίζει τις δράσεις πάνω στην πρόληψη των νόσων και την προαγωγή της υγείας, δείχνουν την έλλειψη προσανατολισμού στην ιατρική εκπαίδευση και εξ αυτής φυσικά της άσκησης της ιατρικής.
2. Η κατάσταση αυτή τονίζει την ανάγκη να απαντήσει κανείς στο ερώτημα τι είδους γιατρό πρωτοβάθμιας φροντίδας χρειάζεται ώστε να καθορίσει τι πρέπει αυτός ο γιατρός να μάθει, να διδαχθεί. Προέχει με άλλα λόγια η σαφής περιγραφή του έργου του λειτουργού της πρωτοβάθμιας.
3. Εν συνεχεία έπεται η σαφής περιγραφή των εκπαιδευτικών αντικειμένων που πρέπει να περιέχονται στο πρόγραμμα σπουδών τόσο των ιατρικών σχολών (προπτυχιακό επίπεδο) όσο και στο πρόγραμμα εκπαίδευσης στην ειδικότητα (μεταπτυχιακό επίπεδο).
4. Συνιστάται να δρομολογηθούν συνεργασίες και ανταλλαγές απόψεων, εμπειριών μεταξύ εκπαιδευτικών κέντρων των Γενικών / Οικογενειακών Ιατρών (ΚΥ και νοσοκομειακών κέντρων), των Ιατρικών Σχολών, των οργάνων της ΕΕ (Wonca Europe, Euract) , καθώς και αυτών των χωρών που δεν είναι μέλη της ΕΕ.
5. Η Γενική /Οικογενειακή Ιατρική οφείλει να δώσει μεγαλύτερη έμφαση στην απόκτηση δεξιοτήτων ανάπτυξης, εφαρμογής και αξιολόγησης προγραμμάτων πρόληψης και προαγωγής της υγείας.
6. Παράλληλα με την απόκτηση γνώσεων και δεξιοτήτων, είναι εξ ίσου απαραίτητο να αναλυθεί η δυνατότητα του γενικού / οικογενειακού ιατρού να εφαρμόσει τέτοιου είδους προγράμματα. Αν έχει τις τεχνικές δυνατότητες (υποδομή, οργάνωση), τον διαθέσιμο χρόνο ,την αρμοδιότητα, κλπ.
7. Τέλος, είναι απαραίτητο να θεσπισθούν τα κατάλληλα κίνητρα ώστε να κινητοποιηθούν οι γενικοί / οικογενειακοί ιατροί. Τέτοια μπορεί να είναι οικονομικά καθώς και τεχνικά και επιστημονικά κίνητρα.

Αθανάσιος Συμεωνίδης

## 7. Summary of the outcomes in Lithuanian

### Išvados ir rekomendacijos

Autorius Leeuwenhors šeimos gydytojo apibrėžime kaip tik pabrėžią jo reikšmę vykdant profilaktinį darbą. Savo analizėje mes apžvelgėme keturių Europos šalių šeimos gydytojų rengimo sistemą, išanalizavome įstatyminę bazę bei gydytojų rengimo programas, o taip pat pateikėme šias **išvadas ir rekomendacijas:**

8. Šeimos gydytojų (t.y bendrosios praktikos gydytojų) rengimas ligų profilaktikos ir sveikatos stiprinimo srityse yra vienas iš prioritetinių uždavinių. Ypač svarbu užtikrinti nenutrūkstamą gydytojų tobulinimą šiose srityse per visą mokymosi laikotarpį pradedant ikidiplominėmis studijomis, tęsiant mokymą podiplominėse tęstinėse studijose. Taip pat svarbu integruoti šeimos gydytojų prevencinių kompetencijų ugdymą tokiose disciplinose kaip kardiologija, onkologija ar endokrinologija.
9. Būtina keistis patirtimi tarp asmens sveikatos paslaugų centrų ir akademinų mokymo institucijų ir tarp kitų visuomenės sveikatos paslaugų institucijų bei plėsti bendradarbiavimą su Europos Sąjungos ir trečiosiomis šalimis.
10. Ligų prevencijos įgūdžių mokymas turi būti sufokusuotas į ankstyvąją diagnostiką ir efektyvių skryningų programų įdiegimo skatinimą, kas užtikrintų efektyvių pirminės sveikatos paslaugų teikimą.
11. Ligų prevencijos ir sveikatos stiprinimo dalykų mokymas turi būti pagrįstas mokymusi iš „asmeninio mokytojo meistriškumo“ , taikant šiuolaikinius interaktyvius mokymo metodus (diskusijos mažose grupėse, mokymosi rezultatų ir mokymo programų vertinimas).
12. Sveikatos sistemos globaliniame lygmenyje šeimos gydytojas turi dirbti kaip dispečeris, kuris koordinuoja ir užtikrina ligonių gydymo ir profilaktikos priemonių tęstinumą ir prioritetą teikia efektyviai ligų profilaktikos ir sveikatos stiprinimo strategijai.
13. Prieš pradėdant planuoti šeimos gydytojų vykdomas ligų profilaktikos ir sveikatos stiprinimo programas būtina įvertinti darbo laiko sąnaudas, techninį aprūpinimą, gydytojų motyvaciją, darbo apmokėjimą už šią darbo sritį.

Šeimos gydytojas turi būti skatinamas aktyviai dalyvauti organizuojant ir įdiegiant ligų prevencijos ir sveikatos stiprinimo priemones prisirašiusiųjų pacientų bendruomenėje.

## 8. Summary of the outcomes in Polish

Przeprowadzona analiza programów kształcenia, obowiązujących regulacji prawnych oraz roli lekarzy rodzinnych w dziedzinie promocji zdrowia oraz prewencji chorób w czterech krajach europejskich zaowocowała opracowaniem listy następujących wniosków i rekomendacji:

1. Zagadnienia z zakresu promocji zdrowia i prewencji chorób stanowiąc powinny priorytet w trakcie opracowywania programów kształcenia lekarzy rodzinnych. Szczególnie ważne jest zachowanie ciągłości procesu kształcenia w tych dziedzinach na poziomie przed – i podyplomowym, a także w trakcie włączania kursów z zakresu innych specjalizacji medycznych.
2. Wskazana jest wymiana doświadczeń pomiędzy ośrodkami kształcenia LR, strukturami akademickimi oraz krajami EU (WONCA-EURACT) i krajami spoza Unii.
3. W nauczaniu musi być położony nacisk na działania praktyczne, specyficzne dla POZ oraz na wykształcenie właściwych dla POZ postaw i nastawienia. Szczególny nacisk powinien być położony na wczesną diagnostykę oraz efektywne procedury z zakresu screening'u.
4. Nacisk w kształceniu winien być położony na nauczanie umiejętności w praktyce lekarza rodzinnego („nauka zawodu u mistrza”), pracę w małych grupach z wykorzystaniem nowoczesnych metod kształcenia oraz odpowiednią ewaluację postępów studenta i rezydenta.
5. Na poziomie systemu ochrony zdrowia niezwykle ważne jest promowanie roli lekarza rodzinnego jako tzw. gate-keeper'a, który odpowiedzialny jest za zapewnienie i koordynację ciągłej opieki nad pacjentem.
6. Oprócz wiedzy i umiejętności, należy przeanalizować także możliwości (w tym techniczne, czasowe i uprawnienia) lekarzy rodzinnych, zanim rozpocznie się proces wdrażania programu zdrowotnego. Niezbędne jest również zastosowanie odpowiedniej motywacji dla LR (techniki finansowania).
7. Należy zachęcać lekarzy rodzinnych do aktywnego uczestnictwa w inspirowaniu, tworzeniu i rozwijaniu programów z zakresu promocji zdrowia i prewencji chorób na rzecz ich lokalnej społeczności. Lekarze rodzinni powinni współuczestniczyć w tworzeniu programów, inspirować oraz organizować proces ich powstawania, a także implementować własne wytyczne w zakresie prewencji chorób i promocji zdrowia.

## 9. Attachments

### Attachment I

#### **Analysis of Undergraduate and Postgraduate Curricula and the Description of the Role of the Family Doctor in Disease Prevention and Health Promotion**

Expert Opinion prepared under the Leonardo da Vinci Project

By Athanasios Symeonidis, Dimitris Karanasios, Greek Association of GPs

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#### **Introduction**

The last decade European General Practitioners/Family doctors(GP/FD) developed an initiative for a new definition of General Practice/Family Medicine (GP/FM). A new definition of the specialty since it is a discipline strongly related with society and social changes; and the last decades a lot of changes have been happened (demography, unemployment, lack of solidarity, immigration, new technology, poverty).

The content and the theoretical background of the discipline of GP/FM have been well-defined in a number of textbook<sup>1,2,3</sup>. But in 2002 all European organizations of GP/FM under the umbrella of Wonca Europe and the initiative of EURACT, had a consensus meeting the result of which was the New Definition of GP/FM.

The work of the GP/FD is focused on open access to all individual problem, leading to a practice population with a high level of complex complaints and a low prevalence of serious disease. Thus the physician must develop concepts of health, function and quality of life in the populations

served, as well as models of diseases. This finds expression in the preventive and health promotion activities of physicians and in risk factors management.

According to the New Definition prevention of diseases and promotion of health remains one of the most important principles of GP/FM. The principles of the discipline together with the 11 core competences form the framework and the conditions under which, the prevention and promotion could be best developed.

The GP/FD serving a defined population for a long period, often for life-long, has a unique advantage to built a strong and very special relationship with his/her patients. Characteristics of GP/FM such as continuity of care, primary care management, comprehensive and holistic approach and community orientation respond to why GP/FDs are the appropriate doctors to develop and implement disease prevention and health promotion interventions.

The Greek GP/FD serving either in public sector or in private one is not, in general, motivated to take over programs of disease prevention and health promotion. In NHS, where a GP/FD is salary paid there isn't any centrally designed program, except the national vaccination program that implemented with great success. In private sector, where is a fee for service payment, things are a little bit better.

The GP/FD in everyday practice includes prevention and promotion activities through vaccinations, risk factors assessment, total life changes, motivation and encouragement, screening tests. He/she organizes and develops co-actions with other health professionals, teachers, community authorities, in schools, nurseries, unions or other social bodies.

## **1. Analysis of Medical Studies Curricula**

Medicine students in Greece have to undergo six years of studies before graduation. In this period they must be familiar with the principals of GP/FM. There are six Medical Faculties all over the country.

Given that GP/FM is not yet an academic discipline in Greece, issues like health promotion and disease prevention are included in every Faculty's studies curriculum but are taught through other discipline teachers with a few exceptions.

Responsible for the studies curriculum for everyone of the six medical schools is then Undergraduate Studies Curriculum Committee (USCC) of each school. According to their final proposals there are compulsory lessons and lessons which can be selected.

Medical School of Athens University curriculum includes 2 compulsory lessons during the 4th year

of studies, "Preventive Medicine" and "Occupational Medicine". On the other hand, "Child and Adolescent Obstetrics - Family Planning", "Health Services" and "Preventive Psychiatry" are proposed in this Medical School as free selected lessons during the studies period.

Medical School of Aristotle University of Thessaloniki curriculum contains "Social Medicine" as mandatory lesson in the 3rd year and suggests as free selected lessons "Introduction in PHC and GP/FM" year, "Environment and Health" and "Occupational Medicine" in 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> year of studies respectively.

Medical School of Patra University students are obliged to attend "Hygiene" lesson in the 2<sup>nd</sup> and "Health Promotion – Disease Prevention – Community Medicine" lesson in the 4<sup>th</sup> year, while they have the opportunity to select "Occupational and Environmental Medicine" as an optional lesson also in the 4<sup>th</sup> year of their studies.

Students in Medicine School of Thessaly University have to attend "Epidemiology" in the 3rd year, "Social and Preventive Medicine" in 4<sup>th</sup> year and "Occupational Medicine" in 5<sup>th</sup> year of their studies but they have no optional lessons in the field of Health Promotion and Disease Prevention.

Medicine School in another University, that of Democritus in Thrace, has also only compulsory lessons in this field, and these are: "Social Medicine" in 2<sup>nd</sup> year, "Hygiene" and "Hygiene and Safety at Workplace" in 3rd year of studies.

In Medicine School of Ioannina University lessons like "Hygiene and Epidemiology" in 3rd year and "General Practice" in 4<sup>th</sup> year are required for curriculum integration, while "Environmental Medicine" and "Health Policies" in 3rd year of studies are optional.

At last, in Medicine School of Crete University students enjoy the privilege of attending GP/FM issues from a different perspective, as Social and Family Medicine Clinic in this School has been established a lot of years ago. Mandatory lessons are "Social Medicine" in 1<sup>st</sup> year, "Occupational Medicine and Immunology" and "Epidemiology – Public Health" in 3rd year and "Clinical Practice in Primary Health Care" in 5<sup>th</sup> year of studies. On the other hand, students have the opportunity to select the attendance of lessons like "Epidemiological Research Planning" in 2<sup>th</sup>, "Health Planning and Health Economics" in 4<sup>th</sup>, and "Family Planning" in 5<sup>th</sup> year of studies respectively.

In conclusion, it is obvious that there is a big differentiation between the six Medicine Schools curriculum in the field of Health Promotion and Disease Prevention.

Some of them are more focused on GP/FM issues. Some other offer essential knowledge about Health Promotion and Prevention through lessons dealing with epidemiology, public health services, environmental health, workplace safety and generally occupational health, and health policies, both with theoretical and clinical classes.

## **2. Analysis of Postgraduate Training Curricula**

In general, in Medical Schools there have been for years a number of postgraduate studies aiming to deeper knowledge and special skills on new fields not covered by usual program of studies. In the same time, new challenges in terms of new biomedical technology and new needs of health services raise a demand for new knowledge and skills which these postgraduate studies aim to cover.

The last five years, some medical schools developed postgraduate programs on the field of GP/FM and PHC aiming to train GP/FD in research methodology and principles of GP/FM in order to prepare qualified 'personnel' for academic carrier in departments of GP/FM.

The poor academic representation of GP/FM in Greece and low level of research, cause of lack of appropriate infrastructure in education and research, drove the Medical School of the University of Crete to develop a Postgraduate Program in GP/FM and PHC. The main aim of the program was to develop a core of researchers in GP/FM with academic perspectives who could be activated in the field of research and education promoting the discipline in the country.

This postgraduate program was the crowing of long and insistent efforts of the Greek Association of GPs. The contribution of the Scientific Association of GPs of Greece and Cyprus, of a number of European Associations and Colleges and recognised Universities guarantee the success of this Program.

The program started in October 2008, has two thematic sessions: 1. Research methods in PHC and GP/FM, 2. Primary Care and General Practice. The duration is 4 simestres (108hours) and drives to MSc degree or PhD (2 additional simestres).

One of the main objectives of second session is prevention of diseases and health promotion in community.

## **3. Analysis of Specialty Curricula**

The specific training scheme (ST), in Greece, has a 4 years duration and follows the basic medical education of 6 years of studies in one of the 7 medical schools of the country. There exist a number of 654 training posts. To enter the ST there is a waiting period that varies between 4-8 years cause GP/FM is an attractive specialty.



The 4 years training are spent in different hospital posts (38months) and PC settings (10months).

<b>Int.medicine</b>	<b>: 6 months</b>	<b>Surg.</b>	<b>: 4 months</b>
<b>Cardiology</b>	<b>: 3 months</b>	<b>Pediatric</b>	<b>: 4 months</b>
<b>Orthop.</b>	<b>: 3 months</b>	<b>Obs.-Gyn.</b>	<b>: 3 months</b>
<b>Psych.</b>	<b>: 3 months</b>	<b>ORL</b>	<b>: 2 months</b>
<b>Ophthalm.</b>	<b>: 2 months</b>	<b>IUC</b>	<b>: 2 months</b>
<b>Lab. Rad.</b>	<b>: 1 months</b>	<b>DERMAT.</b>	<b>: 2 months</b>
<b>Lab. Microb.</b>	<b>: 2 months</b>	<b>Health Centre</b>	<b>: 10 months</b>

**Course on epidemiology – statistics and research methodology: 1 month.**

The ST scheme starts with a 3 months period in PC for a first contact with primary care issues and the essentials in prevention and promotion of health.

Then follows a rotation in a number of hospital posts where the trainee, among other objectives, is exposed in guidelines and principles of disease prevention and health promotion in fields like COPD, diabetes mellitus, vaccinations, cancer etc.

During the course on epidemiology the trainee learns how to assess the health needs of a certain population and how to design an intervention to cover them.

Finally, in the Health Centre the trainees have the opportunity to implement all recommendations and guidelines of prevention and promotion, as well as the National Program of Vaccinations – smoking cessation, in real time and practice under the supervision of a GP.

#### **4. Analysis of Survey Results**

Following the rules and conditions of the Project, according to which a survey on the evaluation of the competences on disease prevention and health promotion acquired by students (undergraduate studies) and residents (specific training). For this purpose, a questionnaire was addressed to three medical schools, which have introduced courses on PHC and GP/FM, and to three vocational training centres and three regional coordinators of vocational training. It is important to report that the Rectors of two Medical Schools evaluated highest the curricula for students, being very enthusiastic for it.

The three coordinators of VT evaluated higher the curricula for residents than for students.

Concerning the resident curricula, the highest evaluation was for the prevention of cardiovascular disease, arterial hypertension, dyslipidaemia, breast and cervical cancer and prostate cancer.

Concerning the students curricula, the highest evaluation was for inoculations, cardiovascular disease, metabolic syndrome and cancer.

The lowest evaluation , concerning the resident curricula, was for developing and implementing of programs and interventions. Concerning the students curricula, the lowest evaluation was given to prevention of mental disorders and the development of community interventions.

## **5. Analysis of Legal Regulations Concerning the Family Doctors' Tasks and Obligations Relating to Health Promotion and Disease Prevention**

In Greece PHC appeared together with the implementation of the National Health System in 1983. The aims of PHC and the functions of primary care physicians were very well described by the Law for NHS N.1397/Φ.143<sup>A</sup>/7.10.83. Many revisions of this initial law ( N.3370/2005, ΠΔ. 95/2000) added a lot of amendments but the main messages and functions have been unchanged.

According to this founding of NHS Law, the GP/FD, amongst others, has to:

- do preventive medical and dental (a dentist) practice and health education
- do medical, social and epidemiologic research
- educate people on family planning issues
- educate special groups of people on psychosocial factors influencing family balance
- implement epidemiologic research aiming to development and implementation of programs on health promotion.

All this theoretical framework is completed by the National Policy for Public Health which is mainly based on campaigns and programs for:

- smoking cessation
- drug abuse
- obesity
- cardiovascular disease risk factors
- inoculation national program
- cancer

In general, in terms of legal regulations , there is a good framework giving recommendations and instructions on the field of prevention of diseases and health promotion. But, what really happens is quite different. A primary care physician implements a lot of preventive and health promotion issues in every day practice but individually : as individual and not as a member of a larger and organized group of physicians and to an individual and not to a certain population. It would be wise to underline the exception to the above mentioned situation:

- 1) dental decay prevention for people up to 18years (all pupils of primary schools are mapped, trained and reassessed: 70% decrease of dmf score),
- 2) national inoculations program of children (95-100% coverage ),
- 3) health balance testing conducted in children aged 7, 12, 13, and 15. The activities include recording body height and weight, evaluation of the motor system, sight and hearing tests, arterial tension tests and examination of a number of other parameters that allow for diagnosing of early changes and starting preventive actions.

As barriers of not systematic and widely implementation of national programs in prevention and health promotion could be reported the workload of everyday practice, the lack of incentives (for people and doctors), the lack of a centrally conducted registration system to support an assessment procedure.

### **Conclusions and Recommendations**

1. The analysis of the curricula and legal regulations indicated a lack of orientation of the medical education and thus of the medical practice.
2. There is a need to answer what kind of primary care physician do I need in order to define what this physician has to learn.
3. Then the clear description of educational objectives included in both the undergraduate studies program and the specific training curriculum.
4. It is recommended that exchange of experiences should be conducted between the family doctor education centres, academic facilities, EU (WONCA-EURACT) and non-EU countries.
5. GP/FD must give a bigger emphasis to obtain skills on development, implementation and assessment of health promotion and disease prevention programs.
6. Besides knowledge and skills, it is necessary to analyze the family doctors' possibilities (including technical capabilities, time availability and licenses) before project implementation.
7. It is also necessary to apply proper means of motivation for family doctors (financing techniques).

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## Attachment II

### REPORT ON TRAINING OF FAMILY PHYSICIANS IN THE AREA OF PREVENTION OF NON- COMMUNICABLE DISEASES IN LITHUANIA

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#### Introduction

In Lithuania like in other Eastern European countries after the World War II the primary health care (PHC) system was adapted to Soviet Semashko model. It was centralized, tax-based, health care system with strong focus on specialist and hospital care. The medical education of district doctors was based just on internal medicine. After regaining the independence in 1990 the health care system has been in the process of reforming in Lithuania. PHC as separately organized sector within health care system was a new concept in Lithuania. The main objective of the reform in primary health care (PHC) was introduction family medicine institution. Since 1995 the general practitioner (family doctor) institution has been established in Lithuania. Development of the family physician gate-keeping role was proclaimed to be important goal of the new approach in PHC. Reorientation of GPs to health promotion and disease prevention was also one of the main objectives of the reform of PHC. Such reform of PHC demanded proper trained and competent GPs. In 1991-1992 departments of Family Medicine were established and family medicine residency program was developed at Kaunas University of Medicine and at Faculty of Medicine of Vilnius University. EU experts recognized the program of Family Medicine residency training as conforming to the EU requirements in the year 2002. To get critical mass of new PHC providers (family physicians), retraining of district internists and pediatricians was initiated in 1997 and stopped in 2005, when amount of family physicians have reached estimated number 2200.

The medical training in Lithuania is provided by two centers – at the Faculty of Medicine in Kaunas University of Medicine in Kaunas (second largest city) and at the Medical Faculty of Vilnius University in Vilnius, a capital city. About two thirds all medical doctors including family physicians are trained in Kaunas University of Medicine despite the fact that curricula of training in both training sites are almost identical.

The system of training in family medicine nowadays consists of undergraduate, postgraduate (internship and residency) and continuing medical education. In our report we are going to concentrate mostly on the analysis of the training curriculum of Kaunas University of Medicine – the leading medical training centre in Lithuania.

## Legislation on the competencies of family physicians in Lithuania.

The main documents, which describes functions, competencies and responsibilities of family physicians in Lithuania is: Medical norm MN 14: 2005 "Functions, competencies and responsibilities of family doctors", 2005-12-22 Nr V-1013.

This document has 10 chapters (area of application; references; terms and definitions; general statements; rights; responsibilities; competencies; manipulations etc.) and 3 annexes. Chapter 7, COMPETENCIES is the largest part of the document and covers 30 groups of competencies divided according the area of health care or by diseases, conditions.

- Section 13 has a title "Domain of health care and social medicine", where the core public health and preventive care competencies are defined:

Family doctor should have competencies in:

13. Domain of health care and social medicine:

13.1 Should be competent in:

13.1.1 Basics of organization of health care and primary health care;(other areas of social medicine described in sections 13.1.2-13.1.5).

13.2 Should have knowledge and be competent in:

13.2.1 Prevention of diseases and management of risk factors for diseases;

13.2.2 Principles of healthy life style and methods of health education;

13.2.3 Basics of occupational health;

13.2.4 Prevention of infectious diseases;

13.2.5 Prevention of cancer

Other prevention competencies are described in this Medical Norm in the introductory statements for each section, e.g.:

14. Cardiovascular diseases:

14.1 GP should know and be competent in: the main symptoms, syndromes in all groups of patients also, provision of preventive and rehabilitation activities; indications for surgery interventions; drug treatment, including contraindications, side effects; and specialist consultations, also indications for hospitalization.

Similarly preventive activities are described without detailed description in each section (respiratory diseases, gastroenterology etc.). A bit more details on preventive activities are presented for pediatric diseases (sections 23.1.3-23.1.6.), where health promotion, vaccination and prevention of infectious diseases, promotion of healthy nutrition and health supervision before preschool and school age periods are covered. As a separate section Medical Norm 14:2005 defines competencies on vaccination (23.5.6. to be competent in vaccination and in developing plans for vaccination). Capability of GP doctor to have skills of practical vaccination also is mentioned in section 31.38 (special chapter 8 on medical manipulations).

Medical Norm 14:2005 has 3 annexes, where mandatory equipment for the office of family doctor are described. However, the list does not include any materials, which could be used for

health education (leaflets, booklets, charts, tables, books) or audio-visual equipment, which are essential for health education or treatment instruction purposes.

In conclusion, the analysis of Medical Norm 14:2005 on competencies of family doctors showed that this document provides rather poor and only very general description of health promotion and disease prevention competencies and could be evaluated as an example of still remaining significant "medicalization" of GP services in Lithuania.

### **Undergraduate training of physicians at Kaunas University of Medicine**

Undergraduate studies lasts six years, and are available in Lithuanian and English (for foreign students) languages. Theoretical disciplines on medicine such as Human anatomy, Histology-embryology, Physiology, Chemistry and physics, Foreign languages, and Philosophy are subjects of first and second year studies. Among these courses the teaching subject on Individual Health Promotion course (1.5 ECTS) is taught for students as foundation of health promotion in the first year of studies. In the second year of studies the block of Health Philosophy contains subjects on health concepts and general psychology and leads to understanding of holistic approach in health sciences. Clinical medicine subjects starts during third year studies and include such disciplines as Medical diagnostics, General surgery, Patients' care, and others. Fourth year studies cover such disciplines as internal diseases (Cardiology, Pulmonology, Rheumatology, Nephrology, Gastroenterology, Haematology, Endocrinology), Infectious diseases, Dermato-venerology, Psychiatry. The fifth year studies cover the following subjects: Surgery, Obstetrics-gynecology, Nervous diseases, Neurosurgery, Ophthalmology, Anesthesiology and Intensive care. Some issues of certain non-communicable disease prevention are included into curriculum of each clinical subject. For example, the introduction into Cardiovascular epidemiology and prevention is presented during the course of cardiology. During last – six year of undergraduate studies the program of studies contains such modules as Pediatrics, Emergency medicine, Public health, Geriatrics, Oncology, Clinical pharmacology and others. However, the total extent of contact hours, which is devoted to disease prevention, is relatively small and mostly introductory in the majority of teaching subjects, which are taught during clinical courses in the 4<sup>th</sup> and 6<sup>th</sup> year of studies. A kind of exception among the clinical disciplines is Paediatrics teaching module (12 ECTS), which provides some more significant competencies on prevention than other is clinical courses

The medical studies for doctors are finished by state final exam in General medicine, and physician diplomas both Master's qualification is given for students, but without the right to have medical practice independently.

Public health module in the six year of studies includes following courses: Health care management and health service quality, Family medicine, Preventive medicine, Foundations of law, Occupational medicine. The duration of Public health module is ECTS 9 credit points (180 hours). Public health module finishes by examination.

The course of Preventive medicine is mainly focused on prevention of non-communicable diseases. The extent of this course is 2 ECTS (40 hours).

The aim of the studies is to introduce to the students the foundations of preventive medicine, the principles of healthy nutrition, tobacco and alcohol control, hypertension management in community. The basic principles of the planning of non-communicable disease prevention programs are discussed.

Methods of teaching and learning are following: lectures (10 hours), seminars (30 hours), group work in the preparation of non-communicable disease prevention program.

Content of the lectures (training subject Preventive medicine):

1. The subject of preventive medicine. The levels of non-communicable disease prevention (primordial, primary, secondary, tertiary).
2. The strategy of preventive medicine. High-risk and population strategy in prevention.
3. Hypertension management in community (primary prevention, early detection, evaluation, long-term treatment)
4. The principles of cancer prevention (European Code against Cancer)
5. Planning of health promotion and disease prevention programs – the main principles.

The content of the seminars (training subject Preventive medicine):

1. Tobacco and health.
2. Support to smokers for quitting.
3. Detection and prevention of alcohol related health problems. Minimal intervention in PHC.
4. Nutrition and health.
5. Promotion of healthy nutrition.
6. Physical activity and health.
7. Hypertension control in PHC. Patient education to control blood pressure.
8. Prevention of drug abuse.
9. Prevention of cardiovascular diseases (European guidelines on CVD prevention in clinical practice)
10. Presentation and discussion of non-communicable disease prevention programs.

The assessment of preventive medicine course consists of the written formative report (30%), the preparation and presentation of non-communicable disease prevention program (20%), practical skills in the assessment of dependence on alcohol and tobacco (10%), one question at the exam of public health (40%).

Module of Family medicine is mainly based on problem oriented holistic approach to main health problems encountered at family physician practice ("cold" diseases, chest pain, low back pain, chronic fatigue, chronic fever, PHC organization and services provision principles, communication and counseling skills, critical appraisal of medical literature, palliative care issues. All the topics contains some preventive aspects also.



## **Postgraduate studies in family medicine in Kaunas University of Medicine**

Postgraduate studies begin with one year internship and are carried out in various hospitals of the country. When students graduate internship they can apply for residency in family medicine. Enrollment of candidates is organized through contest procedure (special exam on medical subjects, plus interview on motivation). The duration of family medicine residency is 3 years. Curriculum of the residency consists of 8 rotations: Family medicine, Health care of children, Internistics, Surgery, Ophthalmology, Dermatology, Obstetrics-gynecology, Neurology. Exposition in Family Medicine takes over the half duration of the residency. After its completion students have to pass the final exam, receives diploma of family physician, which allows to get the license and to start clinical practice.

There is course of Preventive medicine for students in the family medicine residency. The duration of this course is 40 hours. After the completion of the course students should be able to understand the role of health promotion and disease prevention in PHC, the basic principles helping people to change their behavior, to have practical skills in assessment lifestyle habits (nutrition, smoking, alcohol consumption) and non-communicable disease risk factors management.

Methods of teaching and learning are following: lectures (10 hours), seminars (30 hours).

Content of the lectures:

1. Health promotion and disease prevention – the main strategy of health policy.
2. The role of prevention in PHC.
3. The basic principles helping people to change their behavior.
4. Planning of community health promotion and disease prevention programs.
5. Theory on critical appraisal of the articles in the area of disease prevention.

Content of the seminars:

1. Nutrition of people of different age groups.
2. The principles of helping people to change their dietary habits.
3. Obesity: prevalence, impact on health, the principle of control.
4. Diagnosis of dependence on tobacco and pharmacological treatment of tobacco dependence.
5. Detection and prevention of alcohol drinking problems in PHC.
6. Hypertension management in PHC.
7. GP role in the implementation of European guidelines on cardiovascular prevention in clinical practice.
8. Secondary prevention of cancer.
9. Critical appraisal of the articles in the area of disease prevention.

The assessment of the course: discussion of the appraised articles and the questions on health promotion and disease prevention are included into final residency examination.

### **Continuing medical education (CME) of family doctors at Kaunas University of Medicine**

Kaunas University of Medicine offers special CME course for family doctors "Reduction of risk for chronic diseases". The duration of the course is 36 hours. After completion of this course family doctors should be able to understand the risk concepts for disease and the main principles of health promotion and disease prevention. Methods of teaching and learning are lectures and seminars. Family doctors get acquainted with modern public health conception, the principles of disease risk management, the European strategy for the prevention and control of non-communicable diseases, nutrition impact on health, the promotion of healthy nutrition, the principle of tobacco and alcohol control, cardiovascular and cancer prevention based on European guidelines, social aspects of children health, the principles of patient education, life with disease, national and international health information databases. Department of Family Medicine offers CME course "Control of chronic non-communicable diseases in family medicine practice". Duration of the course – 36 hours. The essence – disease prevention, early diagnosis, management of diabetes mellitus, arterial hypertension, cardiovascular diseases at PHC level.

### **Conclusions and recommendations**

1. Lithuanian legislation on the functions and competencies of family doctors (Medical norm MN 14: 2005 "Functions, competencies and responsibilities of family doctors", 2005-12-22 Nr V-1013.) describes mainly competence areas related with diagnosing and treatment of the diseases. Very small attention is focused for defining of disease prevention and health promotion competencies as well as equipment (teaching materials, demonstrational equipment etc.), which is necessary for provision of the educational work.
2. Teaching curriculum of undergraduate, postgraduate and continuing education at Kaunas University of Medicine (at Medical Faculty of Vilnius University also) contains the rich set of different courses on healthy promotion and disease prevention. It covers majority of areas of clinical, educational and organizational competencies, which are necessary to have in the field.
3. Educational competencies (teaching, instructing, education in groups etc.) in the area of health promotion constitute some gap in the training curriculum for the family doctors. However these functions, which cover the community and the whole population level, are addressed mainly to the Public Health Centers and Municipality Health Bureaus by the Lithuanian national legislation.

4. Primary health care centers (family physicians) and Public Health Centers, Municipality Health Bureaus (public health specialists) should provide better coordination of their disease prevention and health promotion activities at the individual and population level.
5. Concept of team work, which involves community nurses, social workers, health educologists and family physicians should be developed and implemented in the teaching programs of the medical faculties and in the primary health care sector.

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## **Attachment III**

### **Analysis of Undergraduate and Postgraduate Curricula and the Description of the Role of the Family Doctor in Disease Prevention and Health Promotion**

Expert Opinion prepared under the Leonardo da Vinci Project

By Jacek R. Łuczak, College of Family Physicians in Poland

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#### **Introduction**

The family medicine definition accepted by WONCA in 2002 emphasizes the role of the family doctor in health promotion and disease prevention. The domination of prevention remains one of the six most important principles of family medicine.

The family doctor responsible for care over a specific population (entered on his patient list) directs his thinking and actions primarily to the healthy members of the population under his care who are exposed to risk factors in order to ward them off illnesses. The family doctor should regularly plan and carry out preventive operations, however, only those with proven effectiveness record.

The family doctor regularly, continually and systematically collects, processes and uses the data relating to the doctor's patients. Those activities are facilitated by long-term and regular contacts with the persons recorded on the family doctor's list. After several years, the doctor has unique and exhaustive database of demographic and epidemiological data in his practice, as well as data on the health condition, social and economic situation, health culture and health behaviour of his patients and families belonging to the local community.

The family doctor holds information indispensable for the identification of the people for whom interventions (e.g. inclusion in a specific preventive programme) may be effective and profitable. He holds the required knowledge and skills for conducting interventions in a proper manner, possesses the tools of exerting influence (as he is a credible person with authority) and is naturally interested in the application of effective actions leading to regaining and maintenance of good health by the people entered on his patient list. The family doctor operating in Poland is motivated to implement preventive actions owing to the *per capita* remuneration system, which practically means that, in difference to the *fee for service* system, the doctor is encouraged to keep his patients in good health and treat them effectively, because only then the patients visit him less often and he is charged with less work to do.

We can perceive health either from our individual perspective or from a community perspective. In either case, we are talking about the so-called health potential or health capital. Health potential (health capital) is a feature of an individual or a community that conditions their resistance to negative factors affecting health. A large health potential keeps the body balance (homeostasis) and successfully opposes the attempts at breaching that balance. Health potential may be increased by individuals' or community's activities designed for health promotion and disease prevention. The two most important directions of activities which increase health potential include obtaining favourable health oriented changes in the individuals' or community's lifestyle and shaping of a health oriented human environment (place of work, place of residence and social environments).

In the area of health promotion and disease prevention, the family doctor acts through individual risk assessment, practical advice, treatment and monitoring (based on guidelines), as well as inspiration and/or participation in effective screening testing and intervention research.

In addition to extensive social campaigns, with the use of media and health promotion and disease prevention activities conducted in schools, the activities carried out by family doctors and primary-care teams belong to the most effective medical operations.

This Expert Opinion is based on the following definitions:

***Disease prevention:*** counteracting the diseases whose probability of occurrence is feasible in the future. Taking actions to reduce such probability.

***Primary prevention:*** avoidance or at least reduction of exposure of particular persons and the whole society to known and avoidable risk factors.

**Primary prevention:** *action taken to avoid or remove the cause of health problem in an individual or a population before it arises (An international Glossary for Family Practice, Edited by N. Bentzen, WONCA Classification Committee, 1995).*

**Secondary prevention:** *action taken against the course of disease by disease detection and treatment at early pre-clinical stages.*

**Secondary prevention:** *action taken to prevent development of a health problem from an early stage in an individual or a population, by shortening its course and duration (An international Glossary for Family Practice, Edited by N. Bentzen, WONCA Classification Committee, 1995).*

**Health promotion:** *it consists in health strengthening (or augmentation). Each individual or defined population, e.g. a nation, possess specific health potential (health capital) which can be augmented (or reduced) by specific actions the most important of which include education and creation of the conditions for health strengthening by the public authorities supported by a network of organizations and agencies in the community (human capital).*

**Risk factors:** *measurable features which are associated with an increased probability of disease occurrence in the future.*

## **1. Analysis of Medical Studies Curricula**

During a six-year course of study, the students of the Faculties of Medicine should take 105 hours of instruction on family medicine. The specific curriculum is developed on the basis of the Medical Syllabus, conclusions of the discussions conducted by the managers of academic faculties, coordinated by the National Consultant for Family Medicine, as well as the own experience and invention of the respective managers. The family medicine courses are conducted mostly at year six, less often at years five and six and sporadically at year four. The majority of classes are conducted in family doctor practices (more than 50% of the instruction time is spent there). In some medical schools, theoretical classes take place not only in family medicine centres but also in clinics and facilities which handle other narrow specialties. Such classes, however, are less positively evaluated by the students. Mainly classes and seminars dominate among the forms of small-group education. According to the National Consultant's opinion, lectures occupy less than 5% of the instruction time. The courses are concluded by a written or oral test credit. The majority of medical schools evaluate their teaching quality by surveys filled out by the students.

The health promotion and disease prevention issues are included in the Medical Syllabus according to particular diseases, except for care over the healthy child which is treated in a separate chapter.

The study of "Undergraduate Curriculum for Family Medicine" developed in 1999, which is a starting point for the construction of individual school curricula, indicates the knowledge and skills in the area of health promotion and disease prevention, with special stress on teaching the methods of solving such social problems as alcoholism, smoking, substance abuse and family violence.

For example, one of the Polish medical schools has divided equally the course into theoretical studies of family medicine and the classes conducted in a family doctor's practice. The curriculum contains seminars on disease prevention and health promotion (4 hours), substance abuse (2 hours) and environmental health conditions (2 hours). The prevention part is discussed at the seminars devoted to chronic and civilisation diseases and developed during the classes held directly in family doctors' practices.

## **2. Analysis of Postgraduate Training Curricula**

The purpose of postgraduate studies for doctors is, among others, to "expand theoretical knowledge and learn, consolidate and acquire practical skills in the area of the prevention of the most frequent adults' and children's diseases." Postgraduate studies usually last 12 months.

Partial postgraduate studies in internal diseases (11 weeks) include prevention as an element of a systemic approach. The course gives general knowledge of the prevention of cardiovascular, respiratory and digestive system diseases etc. The course contains 5 hours of lectures on AIDS prevention. It also includes the skill of correct examination and interpretation of glycaemia and arterial tension, as well as the skill of prostate evaluation.

Partial postgraduate studies in paediatrics (8 weeks) include especially the following:

- the inoculation calendar, the principles of application of vaccines and serums, the knowledge of post-inoculation reactions and inoculation counter-indications
- newborn baby evaluation (Apgar)
- newborn baby screening tests
- identification of inborn defects and respective procedures
- blood sample collection for the test to diagnose thyroid gland deficiency and phenylketonuria

Partial postgraduate studies in gynaecology and obstetrics (8 weeks), include for example the principles of pre-pregnancy care and the correct pregnancy procedures. The curriculum contains the teaching of breast feeding, premature delivery prevention, serological conflict and foetus defects, with conducting and interpretation of cytological tests. During the course, the doctor learns the principles of prevention, diagnosing and treatment of menstruation and fertility disorders,

genital organ and breast cancer and menopause. The doctor learns the family planning methods and principles as well.

Partial postgraduate studies in family medicine (6 weeks) include for example prevention of the diseases which are the most frequent causes of patients' visits. The curriculum specifies the diseases under a traditional classification, similar to the system applied for partial postgraduate studies in internal diseases or gynaecology and obstetrics. In addition, the family medicine curriculum takes into account the prevention of ear inflammation and hearing disorders, contagious diseases, including the ones propagated by animals, and sight disorders (defects, glaucoma, cataract, injuries and inflammations).

The family medicine curriculum also contains learning of the principles of co-operation with the family nurse, social worker, medical consultants and the organizations and agencies that operate around a family practice, e.g. the local government, schools, the Department of Public Health, non-government organizations and advocacy groups.

The skills to be acquired by the student include the following:

- evaluation of the physical and psychomotoric development of children
- conducting preventive inoculations according to the inoculation calendar
- identification of glycaemia, glycosuria and ketonuria
- conducting skin tests
- application of tetanus prevention
- pregnancy and foetus evaluation
- cytological sample collection
- examination of sight sharpness, colour vision and two-eye vision
- fundus examination

### **3. Analysis of Specialty Curricula**

The family medicine specialty offered to the physicians who have completed postgraduate studies continues for four years. Its goal is to prepare competent family doctors capable of ensuring comprehensive, continuous and managed primary care for individuals, families and local communities. The competences covered by the curricula include health promotion and introduction to promotional projects and the development of specific preventive strategies. After passing a three-stage examination in family medicine (a written test, a practical skill examination and an oral test), the consultant will be authorized to provide health services on his own, also in the areas of health promotion and disease prevention.



Specialty education continues for two years in particular consultant wards and clinics. The directional internal disease, paediatrics or gynaecology and obstetrics curricula may include disease prevention issues as well, which is quite understandable.

However, what is the most important is to include the resident in solving real and practical health promotion and disease prevention problems and conducting screening tests in the family doctor's clinic. Usually the family doctor for whom the resident works during two years is the specialty study manager under a contract with the National Health Fund (NFZ).

The specialty curriculum also includes mandatory courses organized by the Family Doctor Education Centres (OKLR). The health promotion and disease prevention topics are presently included in the introductory course curriculum ("Care of Special Patient Groups"), a two-day oncology course, and primarily in the five-day course on "Public Health". The last course discusses such issues as the following:

- health promotion and disease prevention definitions
- theoretical foundations of health promotion
- health status and health behaviour conditions
- National Health Programme and international programmes (WHO, EU)
- central government's health policy and local community health programmes
- possibilities of health promotion and disease prevention in the family doctors' practices
- prevention of circulation system and cancer diseases, as well as accidents and injuries
- counteracting addictions: smoking, alcoholism and substance abuse
- the principles of healthy diet and physical activity
- preventive inoculations
- dispensary groups

#### **4. Analysis of Survey Results**

As part of this Project, a survey on the evaluation of the competences obtained as a result of the curriculum completion by students and residents was prepared and distributed. The survey was meant for the education leaders in nine academic (students and residents) and two non-academic (residents only) family doctor training centres (Attachment 1). The family medicine education leaders evaluated higher the curricula for residents than those for students.

In the case of the resident curricula, the highest evaluations were given for smoking and substance abuse counteracting, as well as the prevention of myocardial ischemia, arterial hypertension and myocardial failure. In the case of the student curricula, the highest evaluations were given to

preventive inoculations, balance examinations of children, breast feeding, diabetes, arterial hypertension, myocardial ischemia and smoking counteracting.

The worst grades were given to resident curricula for tooth decay prevention, andropause, early diagnosing of children's metabolic diseases and the initiation and implementation of health programmes, as well as the development of prevention information for the patients. Exactly the same topics were poorly evaluated in the teaching of students. In addition, low evaluation of student education concerned such topics as accidents, injuries, poisoning, depression and suicides, together with menopause and skin cancer prevention.

## **5. Analysis of Legal Regulations Concerning the Family Doctors' Tasks and Obligations Relating to Health Promotion and Disease Prevention**

The scope of the primary care physician's tasks is regulated in Poland by the Regulation of the Minister of Health of 20.10.2005. To attain the goal of health maintenance, the physician conducts health education, systematic and regular health evaluations during balance examinations, participates in the implementation of health programmes and diagnoses the environment.

To attain the goal of disease prevention, the physician identifies the risk factors and carries out the activities designed for risk limitation, coordinates the implementation of such activities, qualifies people for mandatory preventive inoculations, participates in the implementation of prevention programmes and conducts systematic and regular evaluation of health condition under screening tests, in accordance with applicable regulations.

Another Regulation of the Minister of Health of 22.12.2004 concerns the scope and organization of preventive health care for children and youth (up to 19 years old). Such care extended by the primary care physician includes in particular conducting health education for students and parents (active advice), carrying out preventive check-ups (health balance testing) in specific age groups, with the obligation to maintain detailed documentation, conducting check-ups before inoculations and execution of preventive inoculations and formulation of guidelines for school nurses.

Health balance testing is conducted in children aged 7, 10, 12 and 13, and between 16 and 19. The activities include recording body height and weight, evaluation of the motor system, sight and hearing tests, arterial tension tests and examination of a number of other parameters that allow for diagnosing of early changes and starting preventive actions.

The Regulation of the Minister of Health concerning the scope of health services, including screening tests and the periods of conducting them, of 21.12.2004 regulates for example the

principles of active preventive care of children until they turn seven. Extensive medical examinations and mandatory inoculations (based on the inoculation calendar) are conducted in children aged 1-2 weeks, 2-6 months, 9 months, 12 months and 2, 4, 5 and 6 years.

The same Regulation determines the principles of cancer prevention. The family doctor (primary-care physician) is expected to carry out in particular:

- interviews on family histories in respect of cancer (during the first visits)
- breast self-examination instruction for women aged more than 18 years
- physical breast examinations for women aged more than 35 years, conducted every year
- examinations of skin, lips, oral cavity and throat every year
- *per rectum* examinations of men and women aged more than 45 years every year

To prevent smoking-related diseases, the family doctor should pass information on the harmfulness of smoking and determine the best methods of smoking counteraction with those addicted. During each visit, the family doctor should evaluate the addiction control progress.

To prevent tuberculosis, the family doctor should conduct interviews and take necessary preventive actions.

To prevent circulatory system diseases, the family doctor should carry out:

- interviews for that purpose
- examine arterial tension in the persons who visit the doctor for other causes than circulatory system diseases
- measure body height and weight to calculate the BMI every three years in persons with obesity or aged more than 40 years
- in the case of BMI exceeding 30, the family doctor should evaluate the patient's diet and establish indications for body mass normalization

The Management Board of the College of Family Physicians in Poland approached the Ministry of Health in Poland several times in the past, suggesting the amendments of the above Regulation, indicating that the execution of all the recommendations contained therein would not give the doctor any time for carrying out the indispensable treatment activities. However, the fact that many interventions specified in the Regulation were included contrary to the current medical knowledge status is even a more important problem. The college postulated to issue an opinion on the Regulation through the Medical Technology Evaluation Agency. Unfortunately, such an opinion has not been ordered.

In addition to the Regulations and orders of the Minister of Health, the principles of the provision of services in the area of health promotion and disease prevention by the family doctors are regulated by the Order of the President of the National Health Fund Concerning Determination of the Conditions of Conclusion and Performance of Health Care Contracts in Primary Care No. 105/2008/DSOZ, issued on 05.11.2008.

The Order specifies two programmes which are separately financed by the National Health Fund:

1) Circulatory System Disease Prevention Programme

This Programme is designed for the people facing specific risk factors who enter ages 35, 40, 45, 50 or 55 in the period covered by the Programme contract and in whom no circulatory system diseases were diagnosed before. It is indicated that the most efficient method would be that based on personal invitations, supplemented by media campaigns and supported by local governments. The effectiveness measures will be the following: the number of patients reporting to examinations, the number of patients displaying risk factors, the number of Programme participants who have used instructions and the number of patients diagnosed for the circulatory system diseases. Expanded examinations allow for risk evaluation under the SCORE scale. The examination records contain personal data. The National Health Fund pays 48 Polish zlotys for one unit (advice) under that prevention Programme. The capitation rate is 96 Polish zlotys per person aged 20-65 years.

2) Smoking Disease Prevention Programme (Including the Chronic Obstruction Lung Disease)

This Programme is designed for smokers aged more than 18 years and in particular for men and women with the obstruction lung disease aged 40-65 years. The methods of inviting them to examinations, the obligation to reveal personal data and the methods of effectiveness evaluation are the same as in the Circulatory System Disease Prevention Programme. The National Health Fund pays 14 Polish zlotys for one unit (advice) under that prevention Programme or 25 Polish zlotys if a spirometry test is conducted as well.

Regardless of the Programmes, for each person who has obtained advice in connection with the circulatory system diseases or diabetes treatment, the rate is multiplied by 3 (base rate x 3 in the monthly settlement).

## **Conclusions and Recommendations**

1. The analysis of the curricula and legal regulations, within the scope covered by this Expert Opinion, indicated an essential lack of topic ordering.
2. A clear and definite determination is required for the approach, scope and detailed contents of the course in public health, with the topics of health promotion and disease prevention as parts of the course. It is necessary to take into account the continuity of instruction (course of studies, postgraduate training and specialty (residency) in family medicine), together with the contents passed during the other clinical and non-clinical courses (e.g. in oncology, cardiology, sociology, medicine etc.).
3. It is recommended that exchange of experiences should be conducted between the family doctor education centres, academic facilities, EU (WONCA-EURACT) and non-EU countries.
4. Education needs to stress the practical activities that are specific for primary care and the development of attitudes and orientations that are proper for primary care. Health promotion and disease prevention education should apply the "age group" approach, with a considerable stress on early diagnosis (e.g. "oncologic vigilance").
5. In education, emphasis should be put on the teaching of skills in the family doctor practice ("professional learning from a master"), small-group work, with the use of modern teaching methods, and proper evaluation of students' and residents' progress.
6. The family doctors who work under the patient-list system (caring for their patient population), who are additionally strengthened by the gate-keeper role and the right to coordinate the care process, are the public health physicians who are able to implement the essential programmes of health promotion and disease prevention in a cost-effective manner.
7. As to health promotion and disease prevention, we need indispensable tools for programme implementation and evaluation. The programme implementation must be preceded by cost effectiveness studies. Family doctors can be involved exclusively in the programmes which have been positively verified by Health Technology Assessment reports.
8. It is not possible to implement health programmes, without respecting the principle of equality. All the programme projects should be covered by equal evaluation procedures as well. The prioritization criteria should be revealed, and the procedures should be simple and transparent.

9. Besides knowledge and skills, it is necessary to analyze the family doctors' possibilities (including technical capabilities, time availability and licences) before project implementation. It is also necessary to apply proper means of motivation for family doctors (financing techniques).
10. Family doctors should co-operate in the development of health promotion and disease prevention programmes, organize that process and implement their own guidelines in the area of health promotion and disease prevention.

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## Questionnaire

Dear Colleagues,

Under our Leonardo da Vinci Project conducted by the College of Family Physicians in Poland, we have adopted the activities designed for the determination of the family doctor's role in the area of health promotion and disease prevention. One of the initial stages of our Project is to establish to what extent specific topics are included in the course conducted by you.

We are writing to request you to evaluate the contents of your courses for students (undergraduate studies) and residents (specialty courses), respectively, with respect to selected topics included in the curricula, as well as the quality of education. I wish to assure you that this Survey is not meant for school evaluation (the collected data will remain confidential), but rather for the evaluation of education in health promotion and disease prevention.

Please evaluate particular areas of competence, using the school grading system and assuming the following marks:

Points	Evaluation	Specification
5	Very Good	Complete and comprehensive course teaching, with all the topics included
4	Good	Course teaching includes all essential topics
3	Satisfactory	Course teaching includes only the most important topics
2	Unsatisfactory	Course teaching is treated superficially
1	None	No course available

It should take you about 15 minutes to fill in this Survey, and it is essential for the success of our Project that you send it back to us by Monday 20.04.2009.

I am personally asking you to offer your kind assistance in this matter.

In case of questions or doubts, please call me at 0-602-626064.

Regards,

Jacek R. Łuczak

Warszawa.15.04.2009

Using the point scale from 1 to 5, please determine to what degree, in your opinion, education in health promotion and disease prevention is conducted for family medicine students and/or residents in the areas specified below.

**Outcomes**

<b>SCOPE</b>	<b>Students</b>	<b>Residents</b>	<b>Remarks</b>
Smoking	5554522 <b>4.0</b>	5555554444 <b>4.64</b>	
Alcohol abuse	5323232 <b>2.86</b>	55545544545 <b>4.64</b>	
Improper diet	3344334 <b>3.43</b>	43434544454 <b>4.0</b>	
Inadequate physical training	3423333 <b>3.0</b>	53443544454 <b>4.09</b>	
Arterial hypertension	4455335 <b>4.14</b>	55545554445 <b>4.64</b>	
Myocardial ischemia	4435345 <b>4.0</b>	5555554455 <b>4.82</b>	
Heart failure	4434145 <b>3.57</b>	5555554255 <b>4.64</b>	
Lung embolism	3123134 <b>2.43</b>	53542423244 <b>3.45</b>	
Diabetes	4455334 <b>4.0</b>	54544554245 <b>4.27</b>	
Breast cancer	5515234 <b>3.57</b>	25554553345 <b>4.18</b>	
Cervical carcinoma	2515234 <b>3.0</b>	23554453345 <b>3.9</b>	
Lung cancer	4415234 <b>3.29</b>	25544544335 <b>4.0</b>	
Colonic carcinoma	5414234 <b>3.29</b>	25545544335 <b>4.09</b>	
Prostatic carcinoma	5414234 <b>3.29</b>	25544543335 <b>3.9</b>	
Skin cancer	4213124 <b>2.43</b>	25524523344 <b>3.55</b>	
Inoculations	4445535 <b>4.29</b>	45545554355 <b>4.55</b>	
Children's health balance tests	4445535 <b>4.29</b>	44245554455 <b>4.27</b>	
Children's metabolic diseases	2144124 <b>2.57</b>	52235322344 <b>3.18</b>	
Tooth decay	3144225 <b>3.0</b>	33114122235 <b>2.45</b>	
Andropause	2113133 <b>2.0</b>	33314412243 <b>2.73</b>	
Menopause	2113134 <b>2.14</b>	44544454254 <b>4.09</b>	
Accidents, injuries, poisoning	3113142 <b>2.14</b>	33534542342 <b>3.45</b>	
Depression and suicides	2133334 <b>2.71</b>	53545552334 <b>4.0</b>	
Pregnancy care	2124345 <b>3.0</b>	53545553353 <b>4.18</b>	
Breast feeding	3444445 <b>4.0</b>	23544554455 <b>4.18</b>	
Family violence	3413343 <b>3.0</b>	45544532345 <b>4.0</b>	
Risk factors, including genetic ones	2433345 <b>3.43</b>	33543422355 <b>3.55</b>	
Health promotion and education	3444435 <b>3.86</b>	43544553454 <b>4.18</b>	
Initiation and implementation of health programmes	2134331 <b>2.43</b>	34213332342 <b>2.73</b>	
Development of information materials for patients	2133431 <b>2.43</b>	25114422343 <b>2.82</b>	



**Attachment IV**



Work package No 1

**General Practitioners' skills profile in health promotion and disease prevention.**

The results of analysis of the training programme and description of GP's role in health promotion, disease prevention and the GP's competences which should be achieved during the specialization

AUTHORS: Katarzyna Machaczek, Malcolm Whitfield

**General Practitioners' skills profile in health promotion and disease prevention.  
The United Kingdom – Royal College of General Practitioners**

Skill Area	Aspect	Ability
<b>A person-centred approach</b>	<b>The broad context of an individual's life. An individual's lifestyle.</b>	<ul style="list-style-type: none"> <li>• Demonstrate an understanding of the patient's (and where appropriate the family's) expectations and the community, social and cultural dimensions of their lives).</li> <li>• Help the patient to understand work-life balance and, where appropriate, help patients achieve a good work-life balance.</li> <li>• Demonstrate an understanding of the concepts of risk and be able to communicate risk effectively to the patient and his or her family.</li> <li>• Describe the effects of smoking, alcohol, and drugs on the patient and his or her family.</li> <li>• Promote health on an individual basis as part of the consultation.</li> <li>• Negotiate a shared understanding of problems and their management (including self-management) with the patient, so that the patient is empowered to look after his or her own health.</li> <li>• Recognise and contend with the potential tension between the GP's health promotion role and the patients' own agenda</li> </ul>
<b>Problem-solving skills</b>	<b>Basic clinical skills and evaluating scientific evidence</b>	<ul style="list-style-type: none"> <li>• Assess an individual patient's risk factor</li> <li>• Use basic statistical technique</li> <li>• Interpret evidence about a screening programme and decide whether it is worthwhile – for individuals or groups</li> <li>• Use routinely available data to describe the health of his or her local population, compare it with that of other populations, and identify</li> </ul>

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		<p>localities or groups with poor health within it.</p> <ul style="list-style-type: none"> <li>• Undertake a needs assessment of a target group or service.</li> </ul>
		<ul style="list-style-type: none"> <li>• Aiming at a holistic approach to the patient and his or her family, where the main focus would be in promoting their health and general wellbeing.</li> <li>• Reducing risk factors by promoting self-care and empowering patients is an important task of the GP.</li> <li>• Minimise the impact of the patient's symptoms on his or her wellbeing by taking into account the patient's personality, family, daily life and physical and social surroundings.</li> <li>• Working with other members of the primary healthcare team to promote health and wellbeing by applying health promotion and disease prevention strategies appropriately.</li> <li>• Coordinating a patient's care provided by other healthcare professional and care provided by other agencies.</li> <li>• Acting as an advocate for the patient and her or his family.</li> </ul>
		<ul style="list-style-type: none"> <li>• Understand the concept of health.</li> <li>• Understand approaches to behavioural change and their relevance to health promotion and self-care.</li> <li>• Be able to judge the point at which a patient will be receptive to the concept and the responsibility of self-care.</li> <li>• Understand the role of GP and the wider primary healthcare team in health promotion activities in the community.</li> <li>• Understand the importance of ethical tensions between the needs of the</li> </ul>

		<p>individual and the community, and to act appropriately.</p> <ul style="list-style-type: none"> <li>• Be able to work as an effective team member over a prolonged period of time and understand the importance of teamwork in primary care.</li> </ul>
<b>Community orientation</b>		<ul style="list-style-type: none"> <li>• A responsibility for the individual patient, her or his family and the wider community.</li> <li>• Understand the characteristics of the community including socio-economic, ethnicity and health features.</li> <li>• Engaging in the public health agenda and thus influencing health policy in the community.</li> </ul>
		<p><b>DESCRIBE</b></p> <ul style="list-style-type: none"> <li>• The need to reconcile the needs of individuals with the needs of the community in which they live.</li> <li>• The scale of health problems in a locality in terms of incidence and prevalence, and be able to make comparison with other populations.</li> <li>• The interrelationship between health and social care including the wider determinants of health within community, e.g. housing, employment and education.</li> <li>• The impact of poverty, genetics, ethnicity and local epidemiology on an individual and a local community's health.</li> <li>• The impact of inequalities and discrimination on health.</li> <li>• The inequalities in healthcare provision: the "inverse care law".</li> <li>• The structure of her or his local and national healthcare system and its economic limitations.</li> <li>• The roles of the other professionals involved in public health, e.g. school</li> </ul>

		<p>nurses, health visitors and public health specialists.</p> <ul style="list-style-type: none"> <li>• The importance of involving the public and communities in improving health and reducing inequalities.</li> </ul>
		<ul style="list-style-type: none"> <li>• Being aware of the concept of holism in GPs' wider role as a family doctor with a key responsibility for the wider public's health and should have:</li> <li>• Knowledge of the holistic*concept and its implications for the patients' and her or his family's care.</li> <li>• An ability to understand a patient as a bio-psycho-social 'whole'.</li> <li>• Skills to transform holistic understanding into practical measures.</li> <li>• Knowledge of the cultural background and beliefs of the patient, in so far as they are relevant to health care.</li> <li>• Tolerance and understanding towards patients' experiences, beliefs, values and expectations, as they affect healthcare delivery.</li> </ul>
	Contextual	<ul style="list-style-type: none"> <li>• <b>Ability to describe</b></li> <li>• The impact of the local community, including socio-economic factors, geography, culture and the workplace on patient care.</li> <li>• The impact of overall GP workload on the care given to the individual patient, and the facilities (e.g. staff, equipment) available to deliver that care.</li> <li>• The financial and legal framework in which health care is given at practice level.</li> </ul>
Self awareness	Attitudinal	<ul style="list-style-type: none"> <li>• <b>GPs should have awareness of:</b></li> </ul>

<p>An equilibrium between work and life</p>		<ul style="list-style-type: none"> <li>• Self – an understanding of their own capabilities and values and that their attitudes and feelings are important determinants of how they practise.</li> <li>• The interaction of work and the doctor’s own private life, and striving for a good balance between them.</li> <li>• Ethical aspects of clinical practice (prevention, diagnostics, therapy, factors that influence lifestyles).</li> </ul>
	<p>Evaluating scientific evidence</p>	<ul style="list-style-type: none"> <li>• <b>Ability to describe</b></li> <li>• How to access, read and assess medical literature critically.</li> <li>• The general principles, methods and concepts of scientific research and the fundamentals of statistics (incidence, prevalence, predicted value etc.).</li> <li>• The scientific backgrounds of public health, epidemiology and preventative health care.</li> </ul>

\*Holistic has been defines as:

*"Carrying for the whole person in the context of the person’s values, their family beliefs, their family system, and their culture in the larger community, and considering a range of therapies based on the evidence of their beliefs and cost".*

Kemper (2000)

*"A willingness to use a wide range of interventions... an emphasis on a more participatory relationship between doctors and patient; and a awareness of the impact of the 'health' of the practitioner on the patient"*Pietroni (1987)

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