

CASE STUDY

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Comparative Review of Education Programs of Family Medicine (FM) in Bosnia and Herzegovina and Several Transition Countries

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ABSTRACT

Family Medicine as an independent medical discipline is relatively young in the countries of Southeast Europe. Still are used the old models of all forms of education in this module, although most countries accepted Bologna undergraduate teaching concept and already implement it with greater or lesser success. Measuring the effects of the qualities of these concepts and models is not done systematically nor in uniform manner, so it could not be compared by the unique variables measuring the quality of education curricula, and especially the quality of education level of the graduates at the first, second and third degree courses and other forms of education. This paper provides a comparative overview of the state of education in the area of family medicine in the region. It creates comparison according to the study duration for undergraduate and postgraduate studies, doctoral studies and specialized studies in specified areas. What stand out are the proposals to improve education in the field of family medicine in the region.

Keywords: medical faculties in southeastern Europe, Family medicine, education curricula.

1. INTRODUCTION

Family medicine/Family practice is first step between health care workers and patients (the gate to the Primary Health Care System) - PHC, and with main role to health care protect all family members in the ambulance/surgery and at home (home care, palliative care, health promotion, health education, polyvalent patronage, etc ,of healthy and sick people) (1, 2).

Specialist in Family Medicine is a medical doctor who provides personal, primary, continuing and comprehensive health care to individuals and families in the local community regardless of their age, gender or disease. Specifically, it deals with the preservation and improvement of health, developing healthy lifestyles and prevention of communicable and non-communicable diseases. Family doctor treats patients who have chosen him/her by their own free, in the doctor's office and the home of the patient, and follow them when they are treated in clinics and hospitals.

By conducting a program of specialized training achieves the objective that physicians on the basis of internationally recognized principles are involved in all aspects of primary health care (PHC). By specialist education the family medicine doctor is qualified to: Organize and taking part in equipping

the family medicine offices and the rational use of equipment, personnel and financial resources; Managing the team of family medicine in the professional part and in the part of fulfilling the required documentation; Analysis and monitoring of statistical information and to propose the necessary preventive, as well as other measures for the disease prevention; Conduct necessary communication within and outside the health care system with a goal of implementing the integrated health care for the population. Also to conduct: Implementation of programs of measures for preventive and curative purposes during pregnancy and childbirth, labor, of the total children population, women, especially in the early detection of cancer and other diseases and in particular measures of family planning; Implementation of protection, detection and treatment of diseases in the elderly with timely prevention of chronic disease; Implementation of measures for early detection of malignant diseases; Timely implementation of necessary measures in prevention, education about and treatment of infectious diseases; Implementation of home treatment, care and rehabilitation; Conducting health education and training, as well as health promotion using individual and group methods; Implement necessary measures and procedures in the terminal stages of the diseases.

Countries	Undergraduate Studies (1 & 2 cycle)				Doctoral studies				Specialization				Skills improvement				
	Number of medical faculties	Study duration (yrs.)	Department of Family Medicine	Average number of graduates per year	Study duration (yrs.)	Required literature	The possibility of entry from other universities	Study duration (yrs.)	Duration of lectures (h)	Specialized literature	Hospital internship (yrs.)	Internships in clinic (yrs.)	The number of residents	No of completed residency	Improvement after specialization	Courses	Workshops
Slovenia	2 ¹	6	2	220	3	1	1	4	360	1	2	2	39	25	1	1	1
Croatia	4 ²	6	4	400	3	1	1	3	400	1	2	2	100 ³	100 ⁴	1	1	1
Bosnia and Herzegovina	5 ⁵	6	5	200	3	1	1	3	200	1	1	1	50+76	45+70	1	1	1
Serbia	4 ⁶	6	1	300	3	1	1	4 ⁷	528 ⁸	1	1.5	2	30	25	1	1	1
Montenegro	1 ⁹	6	1	*	3	1	1	*	*	*	*	*	*	*	1	1	1
FYR Macedonia	3 ¹⁰	6	0	360	2	1	1	3	380	1	1.5	1.5	10	10	1	1	1
Kosovo	2 ¹¹	6	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Albania	1 ¹²	6	0	*	*	*	*	2	*	*	*	*	*	*	*	*	*
Bulgaria	5 ¹³	6	1	*	3	1	1	3	36	1	1.5	1.5	*	*	1	1	1
Romania	12 ¹⁴	6	1	2000	3	1	1	3	264	1	1.5	1.2	816	600	1	1	1
Czech Republic	6 ¹⁵	6	1	500	3	1	1	3	48	1	1.5	1.5	100	90	1	1	1
Slovakia	4 ¹⁶	6	1	550	3	1	1	3	100	1	2	1.5	10-100	100	1	1	1
Hungary	4 ¹⁷	6	1	700	3	1	1	5	60	1	1	2	80	80	1	1	1

Table 1. Status of Education in FM within Southeastern Europe Legend: 0 - NO, 1 - YES, * - Data missing

Other obligations of family doctor includes: Continuing education and updating their knowledge using professional literature, acquiring new skills and knowledge that are necessary for their daily work; Ethical relationships with patients, users of health care, towards associates and colleagues; Respect legislation that regulate primarily the work of family medicine in general and health care in general. Model and concepts of education of the Family medicine in South Eastern Europe and large are few different.

Main aims of teaching of Family medicine at faculties of medicine are (1, 2): a) to teach the students to understand principle of comprehensive primary health care - to preserve and promote health, early detect and diagnose diseases, carry out treatments and rehabilitation of individuals and families in their natural environment; b) to provide to the students the understanding of functioning and organization of Family medicine/practice; c) to acquire appropriate/adequate knowledge and skills for understanding and solving the most common symptoms, signs and complaints of every family members who belong to the one family medicine team at one community region; d) to acquire appropriate knowledge and skills for providing care to patients with most frequent acute and chronic diseases in every situations; e) to teach students about influence of social and economical factors for development of some unhealthy situations within family environment, at work place, in community etc. and how to react or prevent these situations (what measures to use); f) finally, to teach students how decide, prepare, realized some research in their family practice and how to prepare and publish results of their investigations. On Table 1 are presented number of hours of Family medicine curricula at most universities in SEE countries downloaded from official web sites in September of the 2014 (3-45).

2. EDUCATION OF PROFESSIONAL PERSONNEL IN FAMILY MEDICINE BY COUNTRIES IN THE REGION

2.1. Slovenia

Education of experts in the field of family medicine in Slovenia is carried out at two universities:

- Faculty of Medicine, University of Ljubljana and;

- Faculty of Medicine of the University of Maribor.

Teaching at undergraduate study at both universities last six years (12 semesters), while the Department of Family Medicine exist in both faculties in Ljubljana since 1994 and in Maribor since 2000.

Specialization in family medicine was founded in 1961, and the Association of FM doctors of Slovenia in 1966. The specialization in the field of family medicine lasts for four years, like in most European countries.

At the Medical Faculty in Ljubljana works 236 university professors, 91 assistant, 99 researchers, 29 young researchers and 397 professional and administrative staff.

In organizational terms, the Faculty is divided into the Department of undergraduate studies in medicine, Department of undergraduate study of Dental Medicine and the Department for professional medical activities.

2.2. Croatia

Education of experts in the field of family medicine in Croatia is carried out at four universities:

- Faculty of Medicine, University of Zagreb;
- Faculty of Medicine University of Split;
- Faculty of Medicine, University of Rijeka;
- Faculty of Medicine University of Osijek.

Undergraduate Studies

Teaching at the undergraduate studies in all four universities last six years (12 semesters), whereby the Department of Family Medicine exists at the Medical Faculty in Zagreb.

Education at the undergraduate medical course includes five groups of subjects: general education courses, nature courses, preclinical, clinical and public health courses.

Upon completion of graduate study of medicine graduate receive the professional title "Doctor of Medicine" (dr. Med.)

After completing undergraduate studies one-year internship is required, after which graduate takes state exam. After successfully passing the state exam graduate can be employed as a general practitioner in private and public clinics or continue to specialize in a more narrow medical field.

Department of Family Medicine was established on March 28, 1980 with aim to introduce students to the basic tasks of a family physician who provides personal, primary and continu-

Plan of the course–FAMILY MEDICINE Academic year 2014/2015		
I. COURSE AIMS		
To teach the students to understand principles of comprehensive primary health care: to preserve and to promote health, early detect and diagnose diseases, carry out treatments and the rehabilitation of individuals and families in their natural environment		
To give the students the understanding of functioning and organization of family medicine (FM)		
To acquire appropriate knowledge and skills for understanding and solving the most common symptoms, signs and complaints of persons in care of a family doctor / general practitioner		
To acquire appropriate knowledge and skills for understanding and providing care for patients with the most frequent acute and chronic diseases and emergency situations		
To give the students the understanding of the influence of social and economic factors in the health care system as well as to give specific knowledge needed for work within the community		
The course should prepare students for research work and for lifelong learning.		
II. COURSE STRUCTURE		
Lectures–16; Seminars–30; Practicals–59; Total–105		
Day	Type	Topic
Monday 16 th February	Lecture	Introduction to course Development and characteristics of general practice / family medicine in Croatia and Europe Family medicine within health system
	Lecture	Patient centered care Family approach in family medicine
Tuesday 17 th February	Lecture	Characteristics of clinical reasoning in FM Communication skills and “difficult” communications in FM
	Lecture	Collaboration between primary and secondary care services, the referral process
Wednesday 18 th February	Practicals	Practical work in the selected FM offices under supervision of a trained tutor
Thursday 19 th February	Lecture	Continuity of care Home visits and long-term home care
	Lecture	Medical records keeping
Friday 20 th February	Practicals	Practical work in the selected FM offices under supervision of a trained tutor
Monday 23 th February	Practicals	Practical work in the selected FM offices under supervision of a trained tutor
Tuesday 24 th February	Practicals	Practical work in the selected FM offices under supervision of a trained tutor
Wednesday 25 th February	Seminar	Care of the infant and child, selected problems of women’s health, care of the elderly Management of chronic diseases
	Seminar	Urinary tract infections and selected nephrological disorders
Thursday 26 th February	Seminar	COPD
	Seminar	Diabetes
Friday 27 th February	Practicals	Practical work in the selected FM offices under supervision of a trained tutor
Monday 2 nd March	Practicals	Practical work in the selected FM offices under supervision of a trained tutor
Tuesday 3 rd March	Practicals	Practical work in the selected FM offices under supervision of a trained tutor
Wednesday 4 th March	Seminar	Rheumatic diseases
	Seminar	Acute respiratory tract infections
Thursday 5 th March	Seminar	Gastrointestinal diseases, Malignant diseases
	Lecture	Drug prescribing
Friday 6 th March	Practicals	Practical work in the selected FM offices under supervision of a trained tutor

Table 1a. Example from curriculum of the Course in Family Medicine at the Medical Faculty Zagreb, Croatia

ing medical care to individuals, families and the community, regardless of age, gender and disease. The task of the teaching is that students learn about and adopt the pattern of a family physician that makes an initial diagnosis of any problem that

encounters in his/hers medical practice. Students should learn how in the assessment of health and illness cover and provide concise review of the physical, psychological and social factors. Students should acquire the particular knowledge and skills needed in providing continuous care to patients with chronic, reversible or incurable diseases. The specific objective of teaching is to help students to integrate previously acquired knowledge and skills and the knowledge and skills to effectively apply in solving the problems of patients who came to a clinic, perform patient’s examination at home, and active, in cooperation with the consultants involved in the care of patients refer it to secondary and tertiary levels of health care.

Postgraduate study in Family Medicine is a compulsory part of specialization in Family Medicine (Ordinance on specialist training of medical doctors in family medicine, Official Gazette no. 129/11). As part of the theory program specialization is performed at the medical faculty.

Croatia should allow specialization of family medicine to large number of doctors working in family medicine in order to meet European criteria according to which all doctors who work in family medicine (EU directives 33/93) must be trained specialists. In 2011, according to the Croatian Institute of Public Health in family medicine worked 2287 physicians of which there were only 1095 (47.8%) family medicine specialists. In relation to the insufficient number of specialists in family medicine, and the age structure of family medicine specialists who work in the health care system, there is a about 150 doctors at specialist training a year. With this intention, is accepted a special project “Specialist training of family physicians”, financed by the State budget of the Republic of Croatia which is planned until 2015. In accordance with the human resources development plan, after 2015 graduate studies as part of specialization will attend about 100 doctors annually.

In addition to undergraduate and postgraduate courses, Medical Faculty in Zagreb organizes also teaching in continuing medical education for doctors of medicine.

2.3. Bosnia and Herzegovina

Education of experts in the field of family medicine in Bosnia and Herzegovina is possible at the:

- Faculty of Medicine, University of Sarajevo;
- Faculty of Medicine, University of Banja Luka;
- Faculty of Medicine, University of Tuzla;
- Faculty of Medicine, University of Mostar ;
- Faculty of Medicine, University of Foca.

Teaching at undergraduate studies last six years (12 semesters with 225 teaching hours), while the Department of Family Medicine exist at the medical faculties in Sarajevo, Tuzla, Banja Luka, Foca and Mostar established in postwar time in B&H.

Family medicine in Bosnia and Herzegovina has a long tradition. In the period from 1976 to 1991, was conducted a teaching of family medicine in support of primary health care in Sarajevo, Banja Luka and Mostar, where the medical students carried out practical training in Experimental Regional Health Centers funded by the Alliance of Managing Interest Communities of health care, which have their own clinics in local communities and strictly defined rules and concepts of work of doctors and polyvalent home visit nurses. All patients were followed through medical documentation and records in the created database.

Family medicine as a teaching subject in a particular form of education began to be realized at the Faculty of Medicine,

Subject title: FAMILY MEDICINE			
Level: undergraduate	Year: VI	Semester: XI	ECTS:
Status: obligatory	Weeks: 15	Total hours: 45	
Responsible professor: Prof. dr. Izet Mašić			
1. Subject goals	<p>The goal of course Family Medicine is to introduce students to the basic concepts of the theoretical and practical application of this medical discipline in their future work. Special emphasis is placed on methods and methodology of acquiring knowledge and skills necessary for future engagement of students as independent physicians in family medicine clinics. The task is teaching the student to learn about and adopt a pattern of FM physicians who makes an initial determination of any problem that appears in his medical practice. The specific goal is to keep the student integrates previously acquired knowledge and skills, and to make them effective application in solving the problem of the patient being disposed in a doctor's office or patient's home.</p>		
2. Purpose	<p>The skills that students should be trained to perform: Subject Family Medicine has the purpose that through practical work at clinics, students become familiar with the basic principles of this discipline and adopts basic practices of family doctor. It is necessary to learn a few practical skills, such as a quality history taking and physical examination of the patient determination, blood pressure measurements, analysis of laboratory results, the determination of glucose and lipids in the blood, placing the catheter, injections (iv, im, sc), infusion, analysis of ECG parameters, the basic components of the neurological status of the patient, writing prescriptions and referral specialists, management cards, managing sick leave, filling injury form, etc. It is necessary to educate students for after graduating classes may: carry out a focused physical examination of patients in outpatient conditions using the skills he acquired in the clinical cases, make differential diagnosis and treatment plan for patients in the outpatient family medicine units in health centers, treats and educates patients, make a plan for disease prevention, health promotion and perform monitoring of the patient, the application of the principle of "teamwork" and exchange knowledge and experiences on various aspects of patient care, demonstrate appropriate professional conduct and behavior in communication with the patient, and to identify problems that may lead to inadequate of patient care.</p> <p>The skills that the student should know: During his studies and after its completion the student needs to learn and I have to practice every day applied knowledge such as: basic methods of patient evaluation (inspection, palpation, percussion, auscultation, analysis and interpretation of the ECG, X-ray, knowledge of the most common more prescribed medications and their dosage to the patient to provide basic information about risk factors for certain nosological groups, submit hygienic-dietary regimen to the patient, and so on. the student should also be familiar with the basics of Medical Informatics and computer skills, and that the same applies in its work to know the basics of analysis imaging (ultrasound, CT, MRI), and so on.</p> <p>Attitudes for students to adopt at the course in family medicine Medical students through their theoretical and practical training and work with their professors and teaching assistants need to adopt the right attitudes for future family medicine doctors. During exercise with patients, students learn how to establish a proper relationship of patient-doctor. This relationship must be based on the principle of mutual respect and appreciation. In addition, the student needs to improve their communication skills, be comfortable and open to the patient, examine the patient, to be interested in his problem, make a proper plan and treatment program, to create a good relationship with other health care professionals.</p>		
3. Outcomes	<p>Through the teaching of the course students will acquire the following skills: Module 1 Introduction, definitions and concepts of FM; 1. The health system in Bosnia and Herzegovina and primary care; 2. Definition, principles and concepts of FM in BiH, neighboring countries and Europe; 3. History of FM in Bosnia and Herzegovina; Module 2. Organization and structure of FM; 1. Health care financing in Bosnia and Herzegovina; 2. Structure-based FM; 3. Standards of personnel and equipment in the FM infirmary; 4. Teams of FM, content and methods; 5. The quality of health care for indicators for evaluation and quality improvement; Module 3. Medical documentation; 1. Information Systems in primary health care; 2. Medical patient record, paper and electronic form; 3. Judicial - medical importance of documentation and data records; 4. The importance of medical records in practice; 5. The importance of medical records in scientific research; 6. Methods scheduling visits, open door system; Module 4. Medical guides and accreditation standards; 1. Definition, aims and functions of a guide; 2. The importance of clinical practice guidelines; 3. The legal meaning of the guide; 4. Guides in Bosnia and Herzegovina; Module 5. Medical Communication Studies; 1. Communication and communication techniques for FM; 2. Difficulties in communication; 3. Relation physician - patient; 4. Significance and counseling skills; 5. Specific areas of counseling and psychotherapy; Module 6. Medical ethics and deontology; 1. Definition and role in FM; 2. Legal aspects of the doctor to the patient; 3. Rights and mistakes of doctors, possible sanctions; 4. Rights and errors of the patient, possible sanctions; 5. Data protection; Module 7. Public health aspects of population and nosological population groups; 1. Infants and young children; 2. Women of child-bearing age and pregnant women; 3. Workers; 4. Elderly; 5. Nosological groups of the population; Module 8. Health promotion; 1. Definition and objectives of health promotion; 2. Documents for health promotion; 3. Education about health and disease; 4. Health - educational recipes; Module 9. The management of mass non-communicable diseases in FM; 1. Management of chronic patients in FM; 2. The patient - hypertension, the incidence and significance; 3. Patient and diabetes, the incidence and significance; 4. Hyperlipidemia; Module 10. The most common pathological conditions in the FM domain; 1. The most common respiratory problems in FM; 2. The most common genitourinary problems in FM; 3. Diseases of the locomotor system (lumbar syndrome, rheumatic diseases, etc.); Module 11. Sociopathy; 1. Addiction and addiction classification; 2. The types of addictions (tobacco, alcohol, drugs, etc.); 3. Depression, the incidence of depression and its management in FM; 4. The role of the family doctor; Module 12. Emergencies in FM; 1. Myocardial infarction; 2. Anaphylaxis and anaphylactic shock; 3. Management of emergencies in FM; 4. The importance of prevention and the risk - factors; Module 13. Home treatment and palliative care; 1. Polyvalent visiting nurse care and active monitoring; 2. Home treatment and home care; 3. Palliative care in the scope of family doctor work, the principles and contents; 4. Hospice; 5. Death and the right to die (euthanasia); Module 14. Geriatric medicine; 1. Definition and basic concepts in geriatrics; 2. The needs and requirements of the elderly; 3. Promoting healthy aging; 4. Specific issues in treatment of geriatric patients; Module 15. Scientific research; 1. Browsing of biomedical literature; 2. The most important biomedical databases; 3. Preparation, writing and presentation of research results; 4. Ethical principles and dilemmas in scientific publication</p>		

Table 2. Course Family Medicine Syllabus, Medical Faculty, University of Sarajevo

University of Sarajevo in 1996, by introducing the Canadian family medicine model Queens University of Ontario in Canada. The same model has been applied in other university centers in Bosnia and Herzegovina. But their concepts in the same period have been experimentally in realized some other countries: Switzerland, Italy, Spain, Netherlands, etc. Over time, the individual Department of Family Medicine began to combine certain concepts trying to create some kind of Bosnia and Herzegovina model. Plan and program for undergraduate course in Family Medicine at the Medical Faculty of the University of Sarajevo can be found on the website of the Department www.unsaporodmed.org.

Legal basis of specialization in the field of Family medicine is regulated by the Ordinance on family medicine ("Official Gazette of BiH" No. 07/99, 50/00 and 22/02), in the framework of the Department of Family Medicine, Medical Faculty University of Sarajevo, Tuzla, Banja Luka, Foca and University of Mostar. Duration of specialization program in B&H changed from 36 to 48 months last year (Family Practice - 19 months and other medical disciplines: Internal medicine - 9; Pediatrics - 4; Emergency medicine - 3; Gynaecology - 2; Psychiatry - 2; Surgery - 2; Public Health - 2; Quality of Health Care and Accreditation - 2 and other education programs by choice - 3 months). Our Program is similar with program proposed by EURACT.

Teaching in family medicine during undergraduate studies is conducted during the 11th and 12th semester in the total amount of 210 hours. Specialization internship for family medicine doctor in the in the Republic of Srpska lasts 36 months, from which the theoretical part takes 1296 hours and 5256 hours of practical work, making a total of 6552 hours.

2.4. Serbia

Education experts in the field of family medicine in Serbia are possible at the:

- Faculty of Medicine, University of Belgrade;
- Faculty of Medicine, University of Novi Sad;
- Faculty of Medicine, University of Nis;
- Faculty of Medicine, University of Kragujevac.

Undergraduate Studies

Teaching at undergraduate studies last six years (12 semesters), without title family medicine, but is used the term General Medicine Department.

Specialization least for 36 months, consisting of the clinical part in duration of 12 months and the outpatient part in duration of 24 months.

Clinical part consists of the following areas:

Field	Duration	Field	Duration
Internal Medicine	6 months	Oncology	1 month
Surgery	3 months	Orthopedics	1 month
Gynecology	3 months	ORL	1 month
Pediatrics	3 months	Ophthalmology	1 month
Infectious diseases	2 months	Dermatology	1 month
Neurology	1 month	Psychiatry	1 month

Table 3. Organization of the clinical part of training in family medicine in the Republic of Serbia

Outpatient part of specialization lasts 24 months and takes place through lectures, tutorials, seminars and workshops and has been made in consultation with coordinator for teaching in the field of general medicine.

Within this part of specialization are required the following

Methodical unit	No.of lectures
The definition of general (family) medicine. General medicine as a separate medical discipline, the general (family) medicine-World and European associations WONCA EURACT	3
Primary health care, its characteristics, health center as a primary health care institutions and organizations of work in general practice	4
Health promotion, prevention work in primary health care (preventive examinations and monitoring patients-legislation)	3
Teamwork, coordination, continuity of work and the specifics of work in general practice	2
The specific decision-making process in general practice, bio.-socio-cultural model of dealing with health problems (holistic model)	2
Program Health Care-Health care of rural population (Ruralhealth-EURIPA)	1
Current legislation in the work of general practitioners and management of medical records	1
Streamlining of the general practitioners work (the problem of medicalization)-rational use of laboratory diagnosis, prescribing, referral to secondary and tertiary level of health care	3
Comorbidity in the work of doctors in general medicine and patient empowerment	3
Family health, orientation toward community and general medicine	2
Information system of general practice	2
Communication in the work of general practitioners	2
Ethical problems and their importance in the work of general practice	1
Medical errors in the work of general practitioners	1
Prevention, early detection and treatment of malignancies in general practice	2
Palliative treatment with special emphasis on palliative therapy and supportive therapy for cancer patients	2
Home care	2
Evidence based medicine, research in general practice (methodology of scientific research in general practice-writing and publication of scientific papers)	4

Table 4. Organization of the outpatient part of specialization in family medicine in the Republic of Serbia

seminars in public health for a period of 12 weeks: Social Medicine-4 weeks; Statistics with informatics-4 weeks; Hygiene-2 weeks; Epidemiology-2 weeks

2.5. Montenegro

Education of experts in the field of family medicine in Montenegro is performed at the Medical Faculty of the University of Montenegro.

Medical Faculty organizes undergraduate studies for the professional title of doctor of medicine for a period of six years or 12 semesters.

The syllabus is designed according to the model of the curricula from faculties in the region, which have a long tradition and embraced the principles of the Bologna Declaration, so that basic studies include preclinical and clinical content, which allows students to systematically acquire the necessary fundamental theoretical knowledge and practical and efficient training, on the other side. Medical Faculty organized and carried out postgraduate studies.

Specialization at the Medical Faculty, University of Montenegro in the field of family medicine is regulated by the Ordinance on specialization "Official Gazette of the Republic of Montenegro", dated 4 December 2006, but has not yet started implementation of specialized studies.

2.6. FYR of Macedonia

Education of experts in the field of family medicine in Macedonia is performed at the Medical Faculty of the University of St. Cyril and Methodius, University in Skopje and the Faculty

of Medicine of the University Goce Delchev in Stip.

Medical Faculty organizes undergraduate studies for the professional title of doctor of medicine for a period of six years, or 12 semesters.

The syllabus is designed according to the principles of the Bologna Declaration, so that basic studies include preclinical and clinical content, which allows students to systematically acquire the necessary fundamental theoretical knowledge, and quality practical training.

Teaching in family medicine at the University of Skopje takes place during the fifth and sixth years of study within the course called “family medicine”–30 hours, and “Clinical practice in family medicine”–40 hours.

2.7. Kosovo

Education of experts in the field of family medicine in Kosovo is performed at the Medical Faculty of the University of Pristina and Kosovska Mitrovica. Medical Faculty organizes undergraduate studies for the professional title of doctor of medicine for a period of six years, or 12 semesters. The syllabus is designed according to the principles of the Bologna Declaration, so that basic studies include preclinical and clinical content, which allows students to systematically acquire the necessary fundamental theoretical knowledge, and quality practical training. Integrated studies of first and second degree for obtaining academic professional title Doctor of Medicine, last six years or 4705 hours of theoretical and practical courses, student work and practice in health care facilities in accordance with Directive 2005/36/EC of the European Parliament and of the Council of Europe from September 7, 2005 on the recognition of professional qualifications in the part related to medical doctors.

2.8. Albania

Education of professionals in the field of family medicine in Albania is performed at the Medical University of Tirana, founded on 23 January 2013 by merging the existing Faculty of Medicine and Faculty for nurses. University of Medicine in Tirana consists of five faculties, 17 academic departments and 26 academic programs. The programs are divided into three academic levels: Bachelor, Master and Doctoral. UMT has more than 8,000 students, and at it work 350 employees from the ranks of teachers and other school staff with the help of 60 people employed in administration.

Teaching is held according to the Bologna process with three levels; three years Bachelor, Master two years, and three years of doctorate. In addition, there is Specialization. The University offers programs of study in general medicine, pharmacy, dentistry, public health, health sciences, physiotherapy, radiology, geriatrics, etc.

2.9. The Republic of Bulgaria

Education of experts in the field of family medicine in Bulgaria is provided at the:

- Medical Faculty, University Sofia;
- Medical Faculty, University of Pleven;
- Medical Faculty, University of Plovdiv;
- Medical Faculty, University of Varna and;
- Medical Faculty, University of Trakia.

Study of Medicine in Bulgaria is in accordance with the state program and lasts 6 years. The study is structured as follows: two years of preclinical studies, three years of clinical studies and the sixth year of clinical practice, or internships. The student may choose to study in English or in Bulgarian language with relatively low living and tuition costs, and diplomas recognized

in Europe and beyond. Teaching in field of family medicine is performed on the third and fourth semester (second year students) with weekly number of hours 2 +2.

2.10. Republic of Romania

Education of experts in the field of family medicine in Romania is provided at the: Medical University of Cluj-Napoca; Medical University of Lasi; Medical University Timisoara; Medical University of Targu-Mures; University of Medicine Carol Davila Bucharest; Medical University of Oradea; Medical University Constanta; Medical University of Arad; Medical University of Craiova; Medical University of Sibiu; Medical University “Titu Maiorescu” Bucharest; Medical Faculty Transylvania University of Brasov.

Basic studies for obtaining the title of Doctor of Medicine last six years, or 12 semesters.

Year	Field	Candidates		
		MD	Doctors of Science	Ratio
2006	Medicine	671	503	75%
2007	Medicine	571	363	63%
2008	Medicine	460	301	65%
2009	Medicine	535	519	97%
2010	Medicine	497	426	85%
2011	Medicine	437	380	87%

Table 5. The ratio of enrolled students and graduates at study medicine in Timisoara by years

Data on specialty of family medicine is not available.

2.11. Czech Republic

Education of experts in the field of family medicine in the Czech Republic is carried out on the:

- First Medical Faculty of Charles University in Prague;
- Second Medical Faculty Charles University in Prague;
- Third Medical Faculty of Charles University in Prague;
- Medical Faculty in Plzen, Charles University in Prague;
- Medical Faculty in Masaryk University in Brno;
- Medical Faculty of Palack University in Olomouc

Year	Total	General medicine	Dentistry
1	287	240	47
2	223	188	35
3	258	205	53
4	214	162	52
5	202	161	41
6	158	154	4
7	69	69	-

Table 6. Structure of students enrolled in 2013 year

Year	Total	General medicine	Dentistry
1	85	75	10
2	68	53	15
3	81	68	13
4	48	39	9
5	47	36	11
6	47	41	6
7	9	7	2

Table 7. Masters in English–and parallel master’s program was attended by a total of 386 students, of which 321 students of general medicine and 65 of dentistry.

Teaching in family medicine, takes place within the course “Hygiene and Preventive Medicine” in the fifth year of the study with 30 hours, and the course “Social and medicine, public

health, hygiene and preventive medicine” in the sixth year of studies with 30 hours.

2.12. Republic of Slovakia

Education experts in the field of family medicine in Slovakia are provided at the:

- Medical Faculty–Slovak Medical University in Bratislava;
- Medical Faculty, Pavol Jozef Safarik in Kosice;
- University Komenskeho in Bratislava, Jessenius Lékařské Faculty in Martine;

University Komenskeho in Bratislava, Medical Faculty

Medical Faculty was established within the Slovak Medical University in Bratislava and it is the successor of the Slovak Graduate Academy which has developed and offered a model of continuing medical education organization cyclical seminars.

Medical Faculty, Pavol Josef Safarik in Kosice lasts 6 years (12 semesters), and teaching is in English. After graduation is obtained the medical degree from this college, accredited by the European Union.

The University was established in 1959 and is the second largest in Slovakia. Faculty has made a significant contribution to the development of education and research in Slovakia. Medical Faculty was established in 1948 and trains students who want to become doctors and surgeons in the field of medicine, preventive aspects of the same and providing full medical care.

Program at JLF UK in Martin University

Review of data on research programs in the Slovak Republic is given in the following tables.

Title of study program	Form of study	Duration of studies (yrs.)	Academic title
General medicine	Regular	6	Doctor of General Medicine
Dentistry	Regular	6	Doctor of stomatology

Table 8. Program—an integrated first and second cycle

Title of study program	Form of study	Duration of studies (yrs.)	Academic title
Care	Regular	3	Bachelor
Public health	Regular	3	Bachelor
Obstetrics	Regular	3	Bachelor

Table 9. Program in the first degree—bachelor program of study

Title of study program	Form of study	Duration of studies (yrs.)	Academic title
Care	Regular / Interim	2/2	Bachelor
Public health	Regular / Interim	2/2	Bachelor

Table 10. Program of the first degree—a master study program

2.13. Hungary

Education experts in the field of family medicine in Hungary are done to:

- Semmelweis University, Faculty of Medicine Budapest
- University of Debrecen, Faculty of Medicine
- University of Pécs, Faculty of Medicine
- University of Szeged, Albert Szent-Györgyi Medical University

Semmelweis University, Budapest was founded in 1635 and today’s name dates from 1969, in honor of “Ignác Semmelweis” who discovered the cause of puerperal fever. Today, Semmelweis

University includes faculties of medicine, dentistry, pharmacy, physical education and sport science and Faculty of Health Sciences. Currently at the Faculty of Medicine study 3,200 students, the Faculty of Dentistry 630, and at the Faculty of Pharmacy 649 students.

University of Debrecen—Medical studies last six years (ten semesters + 1 year internship). The first two years of the curriculum are focused on the theoretical aspects of medicine. Starting from the third year, students learn the theory underlying diseases, internal medicine and surgery basics. During the sixth year students give final exams in internal medicine, surgery, gynecology, neurology, psychiatry and pediatrics.

- Internal Medicine—10 weeks;
- Pediatrics—7 weeks;
- Surgery—5 weeks;
- Gynecology—5 weeks;
- Neurology—4 weeks;
- Psychiatry—4 weeks

The University of Szeged was founded in 1581 in Kolozsvár and is the first institution of higher education in Hungary. Empress Maria Theresa reorganized the institution of the Faculty of Medicine—Surgery in 1775, which was after World War I, moved to Szeged in 1921. Since 2000, the Medical Faculty became part of the University of Szeged, which has 12 faculties. In the academic year 2013/14 the Faculty of Medicine studied 1,036 students (English and German program), at the Dental Faculty 144 and at the Faculty of Pharmacy 63 students. University of Pécs—This is the oldest university in the country, established in 1367, by King Louis the Great. International program began in 1984 and students come from 39 countries around the world. In the academic year 2013/14 was enrolled 151 students in study of general medicine. After six years of the program candidates may receive a general practitioner, after which they can get specialization in various fields. Medical program lasts for six years, or 12 semesters. The first two years includes classes from pre-clinical subjects, from three years of theoretical training has been expanded with clinical practice, where students participate in the clinical departments and teaching hospitals. The last two semesters, students perform clinical rotations for a period of 37 weeks. At the end of the title receives a medical doctor.

3. DISCUSSION

Education in the field of family medicine in the region takes place in more or less similar manner except that there are differences in terms of organization, as well as the names of subjects in which instruction is given. In this regard, it would be desirable that faculties who have not already done so introduce the term “Family Medicine”, as well as to harmonize the curricula in undergraduate studies.

As there is a significant difference in terms of organization of faculties in the region, and some does not have established the Department of Family Medicine, it would be desirable to establish it as soon as possible. Duration of graduate program has been agreed in the region and it is six years everywhere, although there are minor differences that come to the fore in the last semester, doctoral studies are also agreed and last for 3 years, but there are significant differences in the duration of specializations that generally lasts for three, sometimes four years, which certainly need to be harmonized. Also embodiment of theoretical and practical work in the context of specialization is not complied

Country:	Bosnia & Herzegovina	Croatia	Greece	Romania	Slovenia	Turkey	Bulgaria	Serbia	Macedonia
Total length of specialist training (years)	3	4	4	3	4	3	3	4	3
GP setting min (years)	1	2	1	0	2	1,5		2	1,5
GP setting max (years)	1,5	0	1	0	2	1,5			1,5
GP setting avg (years)	0	0	1	1,5	2	1,5	1,5		1,5
Hospital setting min (years)	1	2	3	1,2	2	1,5		1,5	1,5
Hospital setting max (years)	1,5	0	3	0	2	1,5			1,5
Is it a compulsory program?	+	+	+	+	+	-	+	+	-
Nuber of doctors start FM/GP training each year?	50+76*	50	150	816	30	200		30	10
Numbe of entering doctors	decrease	decrease	stable	increase	decrease	increase	decrease	decrease	
Number of doctors finish FM/GP training each year?	45+70*	50	150	600	25	100		25	10
Number of doctors	decrease	decrease	stable	decrease	decrease	stable	decrease	decrease	

Table 11. Comparison of Family Medicine Program Specialization available by EURACT

with and the need to harmonize (Table 11). As for the number of students in medical schools, as well as the number of learners in family medicine are in front Romania, Bulgaria, Poland and Hungary. It is noticeable that the Web sites of some of the University from the countries in the foreground have promotional material such as pricing of studies, accommodation, etc., while the data on the curricula are difficult to find or not available.

4. CONCLUSION

Given the importance of family medicine and the existence of the Association of general-family medicine Southeastern Europe which Bosnia and Herzegovina belongs to, unfortunately through two entities member, and other organizations, it is necessary to continue the exchange of experiences in order to strengthen the role of family medicine in the region. It is necessary to reform the health care system in the counties member of the association, as well as to perform additional training the existing workforce in similar manner as Croatian example.

CONFLICT OF INTEREST: NONE DECLARED.

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