

**HEMP**  
HIGHER EDUCATION PAIN MEDICINE PROJECT

**LABOR MARKET NEEDS ANALYSIS - University of Tuzla**  
**Updated report**

**Strengthening Capacities for Higher Education of Pain Medicine in Western Balkan  
Countries/HEMP 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP**

Project title	Strengthening Capacities for Higher Education of Pain Medicine in Western Balkan countries
Project acronym	HEPMP
Project reference number	585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP
Coordinator	University of Belgrade
Project start date	October 15, 2017
Project duration	36 months

Reference no and title of work package	<b>WP 1 (Comparative analysis of education offer in Pain Medicine</b> 1.4. Analysis of labor market needs relevant for HCW in PCs
Institution	University of Tuzla
Reporting date	14th, June, 2019.
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Document status	Final
Dissemination level	Public

Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

*This project has been funded with support from the European Commission.  
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In Bosnia and Herzegovina, therefore in Tuzla Canton, hospital beds number is the criteria for standardisation of medical specialties.

Department of Public Health of Federation Bosnia and Herzegovina is the key organisation that provides a frame of medical work. In a paper called „Blue Book“, published 2014. by Federal Department of Public Health the number of beds is taken as the basis for calculating the medical staff, as in Republica Serbia, at: all stationary, day care hospitals, emergency care units, laboratory diagnostics in pathohistology, microbiology and transfusiology, in hospital pharmacy, radiological diagnostics, physical medicine and rehabilitation, social medicine, diet preparation work, with administrative and technical workers. Pain medicine is not recognised as an autonomous speciality nor subspecialty.

It is possibly only to indirectly measure a need of pain medicine specialty, through analysis of morbidity and mortality statistics in Department of Public Health of Federation Bosnia and Herzegovina annual reports.

According to the Health statistics annual of Federation of Bosnia and Herzegovina in 2016. the number of cancer patients was 26.283. The number of deaths from cancer in 2016. was 4.542 patients.

Vodeće maligne neoplazme kao uzroci smrti stanovništva u FBiH, 2016. godina (po spolu)  
Leading diagnosis among malignant neoplasms as a cause of death in population of FB&H, 2016 (by sex)

Tabela 7

Rang	Šifra Cod	Dijagnoze po 10. MKB Diagnosis by ICD 10	Ukupno Total	Muški Males	Žene Females
1	C34	MALIGNNE NEOPLAZME BRONHA I PLUČA	1.105	815	290
2	C50	MALIGNNE NEOPLAZME DOJKE	317	4	313
3	C16	MALIGNNA NEOPLAZMA ŽELUCA	300	183	117
4	C22	MALIGNNA NEOPLAZMA JETRE I INTRAHEPATALNIH ŽUČNIH VODOVA	277	151	126
5	C25	MALIGNNE NEOPLAZME PANKREASA	273	144	129
6	C18	MALIGNNA NEOPLAZMA KOLONA	268	157	111
7	C20	MALIGNNA NEOPLAZMA REKTUMA	199	110	89
8	C71	MALIGNNE NEOPLAZME MOZGA	195	102	93
9	C61	MALIGNNE NEOPLAZME PROSTATE	189	189	0
10	C67	MALIGNNA NEOPLAZMA MOKRAČNOG MJEHURA	117	86	31
		OSTALE MALIGNNE NEOPLAZME/OTHER MALIGNANT NEOPLASMS	1.302	631	671
		<b>UKUPNO / TOTAL</b>	<b>4.542</b>	<b>2.572</b>	<b>1.970</b>

Izvor: Federalni zavod za statistiku  
Source: Federal Institute for Statistics

There are no documents or standards in „Blue book“ governing palliative care, only for Oncology and radiotherapy, which is based on a calculation of 4,3 hospital bed per 100,000 inhabitants, and regarding the criteria for staff requirements, we also use the number of inhabitants - 2 health care professionals per 100,000 inhabitants, is also recommended. For a tertiary level of health care, 9 doctors are recommended for 43 beds.

In University Clinical Center Tuzla, in Palliative Care Center in 2016. 573 patients achieved 4.522 hospital bed days, with an average of 9,4 hospital days by patient, with only one doctor.

From the data of Public Health of Federation Bosnia and Herzegovina 2016. annual report it is evident that the number of deliveries has been increased by caesarean section and exceeds 25% in the total number of deliveries. Some of the caesarean sections are for sure motivated with fear of pain, which should be considered with gynecologists and anesthesiologist.

*Izveštaj o porođajima u FBiH u 2016. godini*  
*Report on childbirth in FB&H, 2016*

Tabela 22

Dobne skupine majki Age groups of mothers	Ukupno broj porođaja (kol. 3-5) Total number of childbirths	Od toga Of which				Sekcija sections	Ukupno broj rođenih Total number of births	Od toga Of which		
		uz stručnu pomoć with assistance	na vrijeme full term	prije vremena premature	prolongirana trudnoća prolonged			mrtvorodeno still-born	sa TT ispod 2500 weight under 2500 g	sa TT ispod 2000 weight under 2000 g
Ispod 15 god	3	3	2	1	0	0	3	0	0	0
15-19	795	795	751	37	7	157	800	2	48	19
20-24	3.985	3.984	3.825	116	44	721	4.013	19	143	48
25-29	6.545	6.545	6.287	193	65	1.523	6.610	117	241	88
30-34	5.388	5.385	5.163	162	63	1.534	5.461	30	210	91
35-39	2.210	2.210	2.072	100	38	784	2.245	15	118	50
40-44	383	365	336	28	19	178	371	9	34	19
45-49	22	22	20	1	1	12	23	1	4	1
preko 49 god	1	1	1	0	0	0	1	0	0	0
<b>UKUPNO / TOTAL</b>	<b>19.332</b>	<b>19.310</b>	<b>18.457</b>	<b>638</b>	<b>237</b>	<b>4.909</b>	<b>19.527</b>	<b>193</b>	<b>798</b>	<b>316</b>

Human resources play a central role in improving the health sector and are crucial bearers of successful implementation of health system reform. There are many evidence that the number, training and quality of health workers, their regional distribution correlate with positive child survival outcomes and mothers, cardiovascular disease, with immunization coverage, higher coverage by primary health care, etc. Also no

less significant is that human resources also account for a significant part of the budget allocated for health care.

According to the estimate of the population for 2017 of the Federal Bureau of Statistics, made on the basis of According to the results of the 2013 census, there were 2,201,193 people living in the territory of the Federation of BiH in the middle of the year population on an area of 26,109.7 km<sup>2</sup>, with an average population density of 84.3 inhabitants / km<sup>2</sup>. In almost all cantons there have been changes in the age structure of the population, in terms of reduction. the share of the younger population (0-14) and the increase in the share of the population over 65 years of age.

According to the biological type, the population of the Federation of BiH is characterized by a stationary type, taking into account the following criteria: reduction of youth participation (from 16.1% in 2013 to 15% in 2017), significantly increase in the share of the elderly 65+ (12.9% from 2013 to 14.6% in 2017), and the age index 97 old people per 100 young people up to 14 years of age), which indicates that the population of the Federation of BiH is relatively old.

In the natural movement of the population, the indicators are still unfavorable. The birth rate in 2017 is was 9 / 1,000 inhabitants, and mortality was 9.6 / 1,000 inhabitants. The result of these events is negative natural increase (-0.9 / 1,000).

In the Federation of Bosnia and Herzegovina, the number of employees increased in 2017 (to 467,894) from 457,974 in 2016, and the number of unemployed (357,971) decreased compared to 2016 and is lower by 5.3%. According to the results of the Labor Force Survey conducted in 2017, the unemployment rate was 20% and it is lower than in the previous year by 5.6%.

Mortality and morbidity In 2017, diseases of the cardiovascular system (51.6%) and malignant neoplasms (22.3%), and endocrine and metabolic diseases with eating disorders (6.0%) are the leading causes of death population of the Federation of BiH. According to disease indicators, the Federation of BiH is dominated by chronic non-communicable diseases, among others which are significant cardiovascular diseases (CVD), then malignant neoplasms, diabetes, mental disorders and others.

Infectious diseases are a burden on health and health resources. In 2017, it was reported a total of 49,180 patients with infectious diseases (Mb 2234.24% 000), slightly more than in 2016 (48,926 patients; Mb 2217.63% 000). On the total morbidity from infectious diseases, every year the flu is most affected, so in 2017 it accounted for 60.67% of all registered cases infectious diseases, with a total of 29,838 patients, while all other reported infectious diseases make up 39.33% (19,342 patients).

In 2017, a lower immunization coverage than the required values of 95% for the vaccine was recorded against measles, rubella and mumps, or for the diphtheria, tetanus and pertussis vaccine, in all cantons of the Federation of Bosnia and Herzegovina. Lower vaccine coverage leads to a decline in quality

collective immunity of the population against these diseases and the threat of their recurrence in epidemic form. In 2017, 7 new cases of HIV were registered, so the incidence rate is lower than 1% in the general population.

#### Health risk factors

The prevalence of risk factors for the health of the population is high: tobacco is consumed by 44.1% of adults, alcohol 28.8%, over a fifth (21.2%) of adults are obese, and only 24.6% of the population is physically active. Environmental risk factors (contaminated water and food, polluted air, noise, hazardous chemicals, waste substances, etc.) are among the leading public health problems that require constant monitoring. They are especially vulnerable children, pregnant women, the chronically ill and the elderly. In the Federation of BiH, 60% of the population is covered by public water supply systems continuously monitors health. According to the results of research and studies conducted in recent years in the Federation of BiH, 47% of the population is connected to the public sewer system. In the territory of the Federation of BiH, a total of 40% of the collected waste is disposed of in municipal unsanitary landfills, of which there are 54. A total of 36% of the generated waste is not disposed of at all by utility companies. 55% potentially is disposed of in landfills together with municipal waste infectious, 23% chemical and 20% pharmaceutical waste from health facilities. According to the data of the Federal Ministry of Internal Affairs, there is a trend of decreasing traffic accidents, and there is also a trend of decreasing accidents both in the settlement and outside the settlement. Health care organization The provision of the population with health workers in the Federation of BiH is low. In comparison with average of the European region, in 2017, in public sector health facilities, there were employed a total of 26,330 workers (rate 1,196 / 100,000 inhabitants), which compared to 2016 represents a decrease of 0.8%. In 2017, in the health insurance institutes in the Federation of BiH. year, according to the Institute of Health Insurance and Reinsurance of the Federation of BiH, either 879 workers were employed, which is 1.9% more than in 2016 (863). In private health

In 2017, 4,640 health workers worked in institutions / private practice. The age structure of doctors of medicine is unfavorable. In 2017, there were more than a quarter of doctors medicine (29.3%) were aged 55 and over, with over a fifth of doctors aged 45-54 (20.0%). Among masters of pharmacy, a fifth (20.4%) of them are aged 55 and over. Age structure dentistry is more favorable, so two-fifths (41.2%) are under 45 years of age. Significantly the participation of medical specialists over the age of 55 is especially noted among specialists occupational medicine (69.5%), pulmonology (62.1%), pediatrics (41.6%), family medicine (32.8%), etc.

Although the reform of the health care system in the Federation of BiH is based on strengthening primary health care, There are still differences in accessibility to the population in the cantons of the Federation of

BiH, which also applies to dental care. Contrary to strategic commitments, according to which about 80% of all requirements for health care should be met at the PHC level, in 2016 and 2017 it was recorded increased referral to specialists. The average bed occupancy and length of hospital stay in the Federation of BiH decreased in 2017 compared to previous years, which indicates insufficient utilization of hospital capacity and need their rationalizations. The lack of data from the private sector still prevents full insight into health status population and the organization of health care in the Federation of BiH.

### Findings

Indicators of the health status of the population of the Federation of BiH are unfavorable, which is related to more always poor socio-economic situation in the country, population habits, housing conditions and labor, environmental factors and many other factors.

The presence of risk factors for the health of the population is significant: tobacco consumption (44.1% of adults) and alcohol (28.8% of adults), unhealthy diet (21.2% of obese adults), physical inactivity (75.4%), stress, and there are many health risks from the environment.

The population of the Federation of BiH most often suffers from non - communicable diseases, while the share of infectious diseases is also injury significantly less. In this regard, the leading causes of death of the population of the Federation of BiH are from the group non-communicable diseases, so still every other resident dies from heart and blood vessel disease, and each fifth of malignant neoplasms. There are still differences in the availability of health care to the population in the cantons of the Federation BiH.

The implementation of family medicine is still unsatisfactory. The reasons for this are lack medical doctors, staff turnover, slow process of reorganization of services within health centers, non-incentive payment mechanisms, lack of managerial skills and more. The Federation of BiH has a smaller number of hospital beds compared to the surrounding countries and the average of the European region, but it is evident insufficient utilization of hospital capacities, which indicates the need for their rationalization. The lack of data from the private sector prevents full insight into the state of health population and the organization of health care in the Federation of BiH.

### Recommendations

In order to improve the health of the population, it is necessary to implement a series public health interventions, such as: adoption of population policy, activities related to improving the health of the elderly, a systematic approach to prevention and supervision programs for leaders risk factors for the most common diseases, intersectoral promotional interventions at the local level communities, strengthening surveillance of communicable diseases, ensuring continuous funding mechanisms for public health campaigns and more. In addition, it is important to harmonize the existing and adopt a new one legislation related to the control of environmental risk factors, improvement of laboratory equipment



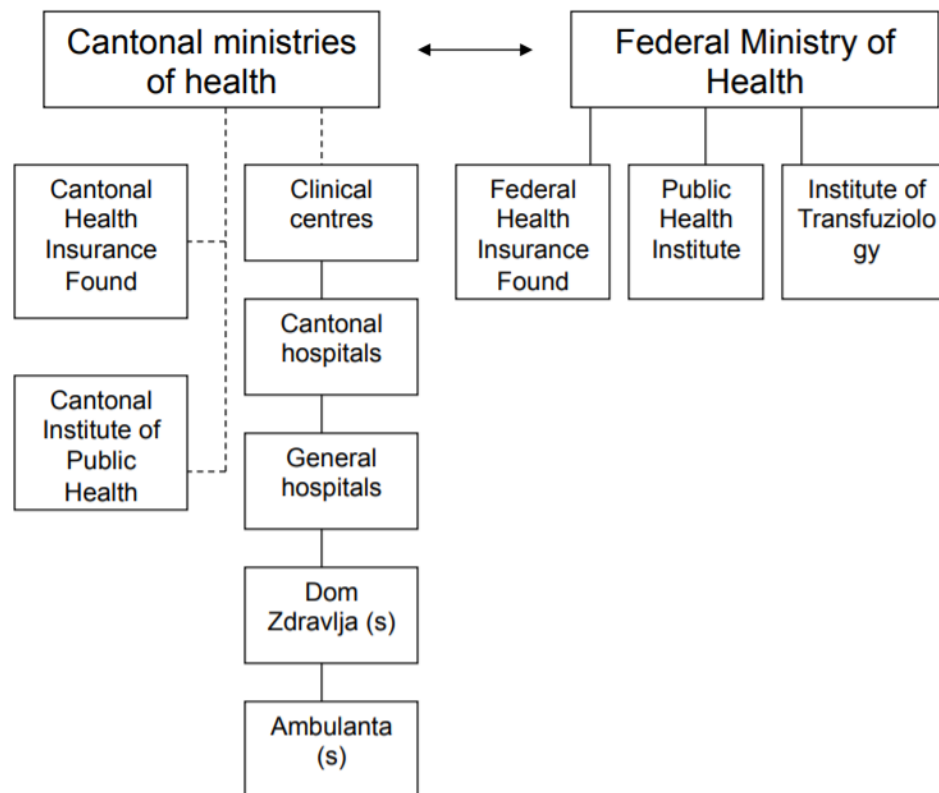
and continuous education of employees. Also, continuous intersectoral cooperation is significant health promotion and prevention issues. With the aim of improving the organization of health care, it is of great importance to adopt a new one

Strategic Plan for Health Development in the Federation of BiH, introduction of incentive payment mechanisms, continuous professional education of employees and rejuvenation of staff in health care institutions. It is also necessary to work continuously on informatization in the health sector.

The health care system in the Federation of Bosnia and Herzegovina is facing a transitional one changes that are reflected in this system, which is divided between the competencies of the Federation BiH and cantons. In addition, the poor socio-economic situation, the lack of funding reform in health care, lack of market prices for services, high hospital debts, and inconsistent application of existing legislation in health care, lead to dissatisfaction of both donors and users health care, and consequently to inequality in the exercise of the right to health care and reducing the number of employed health workers in the public sector, especially in the primary sector health care and public health activities. All this causes difficulties in realization equal, accessible and quality health care and health services in the Federation of BiH, but also poor organization of the health care system at all levels of activity.

### *Organization of healthcare system in FB&H*





"Human resources are a basic determinant health system "

For the past two years, the WHO has dedicated World Health Day to “universal coverage health care” which should be achieved by all UN member states by 2030 as part of the Sustainable Development Goals. Human resources are a basic determinant of health systems without which there is neither universal health care coverage nor expected health care outcomes. At the same time, human resources are the biggest and most expensive input health system, as well as the most difficult resource to provide. Universal health coverage implies that all individuals and communities they receive health services when they need them, without special additional costs. She includes the full range of health services, from prevention and health promotion to therapy, rehabilitation and palliative care.

- Universal health coverage allows everyone to have access services related to the most common diseases that cause morbidity and mortality, and ensuring that the quality of these services contributes to improving the health of the population.
- Achieving universal health coverage is one of the goals they have set themselves committed UN member states to adopting the Sustainable Development Goals in 2015. Countries that make progress in achieving universal health coverage, make progress and to achieve other goals indirectly related to and important for the health of the population.

What is not universal health coverage?

- It is not free access for all possible health services regardless of their price, because there is no country that can provide all basic health services for free.
- Universal health care coverage is not just about financing health care service. It includes all segments of the health system: the organization of health care, health information system, quality control mechanisms, communication channels, health technology, health legislation and management.
- Universal health coverage is not just about ensuring a minimum package health services, but also ensuring progress in the coverage of the population with health services protection and sustainable funding mechanisms.
- Universal health care coverage is not just about providing individual therapy, rather it includes population interventions such as public health campaigns, control water safety, protection from environmental risk factors and similar interventions.
- Universal health care coverage goes beyond health and represents basis for progress in achieving equality, development, social inclusion and cohesion.

Human resources are a basic determinant health system in all areas activities (promotion, prevention, treatment, rehabilitation) about whose number, quality and health care outcomes depend on planning. In addition, human resources are most valuable resources of a health facility by their work individually and / or as a team contribute to the achievement of health goals protection. At the same time, human resources represent the largest and most expensive input health system, as well as the resource that is the hardest to secure.

According to the principles of health care, especially the principles of accessibility, fairness, comprehensiveness and continuity of health care it is necessary to provide such a schedule human resources in the health system which will enable citizens to be equal health care conditions. Lately WHO and OECD emphasize and warn of the increasingly pronounced lack of health workers, especially doctors and nurses, predicting that this trend will continue and in the future. The current situation of human resources, in particular doctor of medicine in the field of public health is adequate to these warnings. Health needs and health requirements, which determine the organization of health protection and necessary resources in the system health care, in the field of public healthcare are huge, complex and represented in each geographical territory of the Federation of BiH and the state of BiH. IN areas of epidemiology are: "new and old" infectious diseases, chronic mass diseases, immunization, food poisoning, epidemics of various types of influenza, DDD, etc. In areas of hygiene and health ecology are: school hygiene, healthy diet and safe food, health of drinking water and other waters (pool water and water for recreation and others), physical activity, air pollution etc. In the field of social medicine, organization and economics health these are: health condition population including health condition of

vulnerable population groups, socio-pathological diseases, organization health care, quality and safety health care, management in health, monitoring and evaluation, health education, health promotion and disease prevention, etc.

Indicator of the number of medical doctors on the number residents gives the first guidelines for assessment health care conditions in one country in terms of the representation required health personnel. It is evident in FBiH lack of specialist doctors in the industry public health. According to the Order of Fr. amendments to the Order on health standards and norms protection from compulsory health insurance ("Official Gazette of FBiH" no. 58/18) at the primary level of health protection per 40,000 inhabitants should be represented by one specialist doctor epidemiology, and at the secondary level health care one doctor specialist epidemiology per 80,000 inhabitants, while would per 100,000 inhabitants should be represented by one doctor hygiene and health ecology specialist and one doctor specializing in social medicine, health organizations and economics. Taking into account this norm health personnel and the latest available data from 2017 on the total number employed specialist doctors, in public health care in the Federation of BiH is missing 38.73% doctor of medicine specialist in the field public health. In the largest percentage lack of doctors specializing in hygiene and health ecology (46.15%), then doctors specializing in epidemiology (40.91%), while a doctor specializing in social medicine, health organizations and economics missing in percentage of 25.00%.

In addition to the above facts, the trend of departure young people from Bosnia and Herzegovina, especially health workers, contributes more and more demand of doctors of medicine. According to data from official institutions, thousands collects young people annually documents required to obtain working permits in European Union countries. It is necessary in the field of public health sufficient number of quality staff, especially doctors of medicine who are job holders and leaders of work teams, who support intersectoral cooperation and multidisciplinary approach to actions in problem solving and health needs in public health, to achieve more effective and efficient positive outcomes for population health. Healthcare workers as the most important resource health, including health workers in the public health business, deserve to all relevant institutions at all levels authorities, directly or indirectly, influence improving the work of health workers and improving their status. This would reduced (e) migration of medical doctors, especially young and middle-aged specialists age, who are increasingly going to EU countries for work improving living standards and better professional development as well progress.

According to the Public Bureau health of the Federation of BiH, in health institutions in FBiH in 2017 were employed 26,330 people, most of them health workers 72.0%, of which health associates were represented with 1.5%, and administrative workers and technically staff were represented with 26.5%. According to the same data source, it is recorded significant gender and age imbalance between health

workers in public health care sector in FBiH. In all profiles of health professionals dominated by women, so 77.5% a woman among nurses/ technicians, 91.5% of women among masters of pharmacy, 66.9% of women among dentists and 61.2% among doctors of medicine. Significant participation is also recorded health workers in old age groups 55 and older, and most at the doctor of medicine in the amount of 30.0%. A special problem is the lack of specialist doctors in the elderly groups up to 34 years with a significant dominance of medical specialists in age groups 55 and older, mostly in the group of physical medicine specialists and rehabilitation (63.4%), infectology (55.0%), epidemiology (52.0%), pediatrics (43.0%) and family medicine (39.2%). Differences in territorial distribution and availability of medical doctors in between individual cantons in the Federation of BiH, influenced are also on the imbalance in the average number residents per doctor of medicine. This relationship in the Federation of BiH amounts to an average of 458 residents per doctor medicine, while this ratio is the lowest at area of Sarajevo Canton (310) and the largest in the area of West Herzegovina Canton (1,233).

Improving the availability of primary health care care is a significant goal of health care reform system in the Federation of BiH. According to the data regular health statistics of the Institute of Public Health of the Federation of BiH for 2017, population of the Federation of BiH primary health care was provided within 983 geographical locations / dispensaries. In primary health care (family medicine, general medicine, pediatrics, school medicine, pneumophysiological protection, medicine labor, ambulance, patronage) in 2017, in The Federation of BiH employed one third of the total number of employed doctors of medicine in public sector (33.8%), and over one fifth in total employed nurses / technicians (23.3%) in the public health sector.

Primary health care per 100,000 inhabitants provided 74 medical doctors and 140 medical nurses / technicians, and one doctor in the work team medicine on average worked two medical nurses / technicians (1.9). Differences in population coverage were recorded primary health care teams. In 2017 the largest number of medical doctors was in Sarajevo Canton (90 / 100,000) and Tuzla Canton (87 / 100,000), while the smallest number of doctors registered in Posavina Canton (45 / 100,000) and Una-Sana Canton (45 / 100,000). One doctor of medicine in primary health care in 2017 took care of the Federation of BiH in an average of 1347 inhabitants. The largest number of inhabitants per doctor was in Una-Sana Canton (2234 inhabitants), and the smallest in the Herzegovina-Neretva Canton (1082 inhabitants). According to the data of regular health statistics for 2017. year, over half of all medical doctors (52.4%) and close to half of nurses / technicians (43.3%) employees in primary health care in the Federation BiH worked in family medicine services.

***Primary health care is an essential basis for the universal health care coverage***

Out of a total of 856 medical doctors employed in the services family medicine, over two-fifths had completed specialization in family medicine (41.9%), above four fifths (81.6%) had completed additional education from in the field of family medicine (PAT), while 26.5% are doctors medicine either on specialization. As in previous years, in 2017, almost three quarters all primary care physicians health care consists of specialists of various disciplines (70.1%). The highest percentage of specialist doctors was is in Tuzla Canton (75.8%) and Sarajevo Canton (66.5%), and the smallest in Canton 10 (50%). It is evident that, according to existing ones data, record unfavorable trends in in terms of human resources in health care in Federation of BiH. It was recorded almost complete absence of a doctor of medicine specialist in the age groups below 34 years, and a significant share is recorded senior health personnel, especially doctors of medicine in general and in certain medical disciplines such as: physical medicine and rehabilitation, infectology, pediatrics, family medicine. Also, the evident ones are significant differences in territorial distribution and availability of medical doctors in between individual cantons in the Federation of BiH, as well as differences in average population at one doctor of medicine. All of the above significantly complicates the possibility of realization equal, affordable and quality health protection, and ultimately universal health care coverage for population of the Federation of BiH. Although there is a need for that, in the Federation BiH does not yet have a Human Plan resources in the health system for the level Federation of BiH. In accordance with the valid regulations, health professionals and health associates with high professional ready to have the opportunity to specialize and subspecialize in a particular branch health activities. Approval for specialization, that is, subspecialization given by the federal minister on an annual basis plan required specializations and subspecialization brought to the proposal cantonal ministries of health, annual proposal of specializations, ie, subspecialization for the canton, cantonal ministries agree with cantonal public health institutes and cantonal health insurance institutes. Also, cantonal public institutes health that give an expert opinion on required specializations and subspecializations for health institutions, they face more challenges in their own work. Despite the strategic commitment Federal Ministry of Health Fr. primary health care reforms through a family medicine team, many the cantons do not develop family medicine as a reform orientation. Despite the existence of a continuous professional education (KPE) in health management conducted by the Institute for Public Health of the Federation of BiH in cooperation with Federal Ministry of Health, and which has so far accounted for a significant share health workers in FBiH, are evident inadequate management knowledge and skills certain public health institutions from areas of health care organization and human resource planning, which has for resulting in a request for specializations that do not correspond to the real ones needs and networks of health facilities on area of cantons in the Federation of BiH. In the absence of strategic human planning resources, in specialization

requirements no significant factors are taken into account such as: age structure of health care employees workers to be replaced at the time, the length of individual education profile of health workers, number unemployed health workers and trends migration of health workers outside BiH, so specialization requirements often are not based on expert, socio-medical or economic indicators nor correspond to actual needs in the field. If in what will not start drafting soon implementation of the Human Resources Plan in health system for the Federation level BiH which will be based on the projection real needs and long-term strategic commitments, there is a possibility compromising the functioning of the system health care in the Federation of BiH. According to the Federal Ministry health, in the period from 10/22/2018. To 3/29/2019 year Specialization plan and subspecialization was submitted by only six Canton: Herzegovina - Neretva, Una - Sana, Zenica - Doboje, Tuzla, West Herzegovina and Canton 10.

Despite the fact that the data related to the lack of health workers in BiH are arbitrary, it is evident that there is a lack of doctors, who increasingly go to some of the European countries due to higher salaries. BiH has the least number of doctors per 100,000 inhabitants in relation to the countries in the region, but it is not possible to talk about a specific number because the number of inhabitants of the country is unknown. Estimates that BiH lacks as many as 3,000 medical doctors are flat, although the fact is that there is an outflow of staff to Croatia, Serbia and lately, especially to Slovenia. The president of the RS Medical Doctors' Union, Milenko Granulić, says that this is just the beginning and that a real migration of health workers from BiH is expected in the next few years. Young doctors, says Granulić, are either fleeing BiH or larger cities, because working in rural areas, unlike a few years ago, is not further stimulated: "People with higher education, many doctors are looking for work, and when you offer them such places as are Čajniče, Han Pijesak, Rudo, Oštra Luka, Rogatica, Gračanica - no one will go. They just want bigger centers. "

In the Netherlands, work immediately if you know the language. Slovenia, unlike BiH, Croatia and Serbia, buys ready-made staff and this is one of the places where doctors have been going lately. The job usually includes an apartment, favorable loans, but also the possibility of employing the closest family members. However, the problem is that none of them wants to speak publicly about the reasons for leaving, expecting to return to BiH one day. Banja Luka pediatrician Branislav Lolić says that there are many reasons why doctors go to other countries, but that one of them is certainly a good offer: "I know that as a pediatrician, if you know Dutch, you can get a job in that country without any problems. We were recently in Slovenia and received information that they need over a thousand doctors at the moment. "



The president of the Federal Trade Union of Healthcare Employees, Abud Sarić, points out that there is a large outflow of healthcare workers from the Federation to Croatia, Slovenia, but also to the United States, Canada and Australia. "With BiH's entry into the EU, all staff will leave BiH because they are paid on purpose," says Sarić, noting that there are fewer and fewer young staff who do not enroll in college: which would be an indicator of the situation when it comes to young staff in the Federation of BiH ". Darija Dojčinović is a student at the Medical Faculty in Banja Luka and says that it is quite expected that in such an organization of the society, young doctors will go outside BiH in search of work: "There is a greater perspective if we go somewhere. If people have the conditions to leave, of course they will leave. I don't believe that I would ever go abroad to work only if I had the opportunity to specialize, but I would probably come back here. "

RS Minister of Health and Social Welfare Ranko Skrbic says that the departure of doctors is a trend faced by all countries in transition, but that not everything is so black: "We already have a slightly present character and requirements for the arrival of top health workers, Serbia to Republika Srpska ".

The health care system in BiH is not so bad that doctors would go to other countries. However, due to low salaries, the ban on dual practice is not difficult to choose a better option in one of the richer European countries. What is interesting is that some doctors who work in Slovenia come to Banja Luka on weekends to earn extra money in private health institutions, which could be a signal to the authorities to do something urgently in order to improve their health system.

Judging by European standards, 2,000 doctors and 4,500 medical technicians are missing in BiH, unionists say, and some smaller local communities could soon be left without doctors, as "white coats" go to larger health facilities. or to European countries.

Zijad Latifovic, president of the FBiH Independent Trade Union of Healthcare Employees, believes that there is a shortage of doctors and other staff throughout BiH, in both the RS and the FBiH. He emphasizes that there is a lack of doctors in smaller municipalities, such as Drvar, and in Livno municipalities.

"The problem is the lack of complete medical staff, we have some clinics in both FBiH and RS where there are no nurses," said Latifovic.

Miodrag Femic, president of the International Association of Medical Doctors for Southeast Europe, said that for more than three years they have been pointing to the problem that there will be an outflow of doctors and medical workers of all profiles from all health institutions, which has been shown in reality. "Especially in secondary and tertiary health care, however, also in health centers. "We have a situation on the ground that from some health centers in RS, 'white coats' are going to the Federation, where their



salary is twice as high, and doctors are leaving the FBiH for Europe," claims Femić. He added that the biggest problem is the outflow of medical staff without going back, and the worst of all is that they are leaving with their families.

"There is a big question to which no ministry has an answer, and that is: Who will treat us tomorrow.

"People in RS are conditioned by specialization, that they have to return twice, that is, they have to work twice as long and in that way tie them to the institution, which is illegal," said Femić. He stated that doctors sign a contract for specialization, for example, in surgery, which lasts for six years, and then they have to return 12 or 18 years of work.

"If he does not do so, he is threatened with a lawsuit. We are working on resolving this problem and initiating collective lawsuits ", stated Femić.

Milenko Granulić, president of the RS Trade Union of Health and Social Welfare, said that there are doctors in health centers in RS in larger local communities, while in smaller municipalities, such as Han Pijesak, Čajniče, Ljubinje and Berković, almost no one will go and there is a lack of doctors.

"There are doctors at the Employment Bureau, but they do not want to go to small municipalities, where salaries are low, and I am afraid we will be left without doctors, especially in small municipalities, because retired doctors who can work are currently withdrawing," he said. Granulić for "Nezavisne". He adds that this problem should be taken into account, that is, that the salaries of those doctors should be increased, not only for them, but for all health care employees.

Adisa Fakić, doctor of otorhinolaryngology and president of the Trade Union of Health Workers of Tuzla Canton and president of the Executive Board of the Trade Union of Healthcare Employees of FBiH, says that, according to standards and norms, the doctor is missing, but not because she left. a ban on employment in public institutions.

"Standards and norms have been around since 1980 and change individually by branches of medicine, so these standards prescribe that few doctors are needed, given the number of inhabitants. So, for example, one otorhinolaryngologist treats 60,000 insured persons, which means that only two doctors come to the whole of Tuzla, which is too little, "said Fakić, adding that the solution to this problem is to change these standards and norms.

According to the EU standard, about 360 doctors should come to 100,000 citizens.

Dr. Rifat Riyad Zaid, president of the Federation of Structural Trade Unions of Doctors of Medicine and Dentistry of the Federation of BiH, says that the problem of lack of medical staff, especially doctors, has existed in our country for a long time. When it comes to fighting the coronavirus, which is taking its toll more and more, and the number of infected is increasing day by day, Dr. Zaid says there is a shortage of professional staff, and fatigue and exhaustion are increasingly present.

Dr. Zaid is also a neuropsychiatrist at the General Hospital "Prim.dr. Abdulah Nakaš" in Sarajevo, and for Preporod.info he referred to the health system in BiH, which in his opinion, especially in the Sarajevo Canton, is facing a great challenge and in a "difficult situation". .

- As every year, this year it is shown how much there is a lack of medical staff, primarily doctors, in medical institutions. This is nothing new. In previous years, many doctors have left our country, this trend has been partially stopped since 2017 in the way that doctors received their Collective Agreement in which their rights are significantly improved, especially when it comes to doctors of medicine and dentistry in the Federation of BiH - says Dr. Zaid. However, as he points out, this trend, although significantly reduced, is still continuing.

There is no official record of doctors who left Bosnia and Herzegovina, however, according to the data we received from the President of the Medical Chamber of the Federation of BiH Harun Drljevic, in 2018 alone, 267 doctors left our country. A year earlier, that number was higher because 362 doctors from the territory of the Federation of BiH left our country and they were issued an "ethical consent" by the competent cantonal medical chambers to go abroad. These numbers could be even higher, because according to Drljević, a certain number of medical doctors leave the country immediately after graduating from college, they do not even register with the medical chamber. A special problem is that the youngest and most capable staff is leaving BiH, ie graduates of medical faculties and young specialists who should take over the health care system in approximately 10-15 years. The average age of doctors is 57.8 years. The analysis of the president of the Medical Chamber of the FBiH also shows that the medical staff consists of temporary doctors with an average of 57.8 years. As the most common reason for leaving BiH, doctors cite primarily low salaries and the poor social status of doctors in BiH society. There are also the impossibility of professional development and advancement in the health care institutions where they work, overwork, frequent physical and verbal attacks, inadequate working conditions, mobbing in the workplace, poorly organized health care system ...

Last year's agreements reached by health unions with cantonal governments to increase doctors' salaries were short-term solutions, as new problems arose.

The Federation of Trade Unions of Doctors of Medicine and Dentistry of FBiH asks the representatives of the House of Representatives of the FBiH Parliament to adopt amendments to the Labor Law and thus enable them to regain representativeness and sign collective agreements as soon as possible.

"The position of doctors this year is further complicated by unreasonable court decisions in some cantons and unreasonably slow reaction of the competent federal ministry, government and individual MPs. We

signed doctoral collective agreements in 2018, and we calculated that in 2019 we will use them to improve the position it depends on the medical service, but now we have started to deal with ourselves again ", said the president of the Federation of Professional Trade Unions of Doctors of Medicine and Dentistry of FBiH, Rifat Rijad Zaid.

It was the signing of the mentioned agreements for doctors that provided a certain light at the end of the tunnel, and the then improvement in the health system led to a slightly smaller number of doctors who left BiH. However, Zaid fears that in 2019, the problem could be expressed again.

"This year has started again with problems related to the signing of collective agreements, because our union has been deprived of representativeness. I am afraid that this is again a sign to doctors to leave this country, because they are obviously not needed. As crazy as this may seem, I think such a message sends to doctors, "Zaid points out. He states that doctors will always leave BiH and every other country, but that this number should be reduced to the minimum, by joint action of unions of doctors and government representatives who create legal solutions and a better reality and future for the health system.

BiH needs twice as many doctors as the current number Drljevic points out that the standard of the European Union countries is 362 doctors per 100,000 inhabitants, and BiH has approximately 160 doctors per 100,000 inhabitants.

When it comes to the Federation of BiH, there are currently 5,200 doctors, and in order for the health system to meet European standards, this number needs to be doubled.

In the past two years, all doctors who were in the labor market, according to Zaid, are employed, however, the capacity of the health system has been weakened precisely because of the previously mentioned problem of the departure of medical doctors. At the moment, our country is crying out for anesthesiologists, surgeons, pathologists, radiologists, pediatricians, psychiatrists and this problem has been expressed for several years, and it often happens that patients in clinical centers operating in BiH have to wait for months for specialist examinations. All countries in the region and the European Union are facing the problem of doctors leaving, including Germany, whose doctors receive better working conditions and higher salaries in the Scandinavian countries and the United States.

According to the principle of "connected vessels", doctors from BiH, Croatia and Serbia go to developed European countries, but also much closer to Slovenia, which in this way complements personal shortcomings with the departure of domestic staff.

Considering the number of patients who, due to the pain are asking a doctor for help, the number of medications being issued each year for pain treatment, there is a great need to increase the number of doctors dealing with pain medicine, especially those with close involvement.

Since there is one pain ambulance in Tuzla Canton, it is possible to start from the recommendation on the need to increase a number of specialist for pain therapy:

- 2 specialist in UKC Tuzla by the year 2025.

In outpatient care, which is equally important for patients who do not need hospital treatment or need to continue therapy after hospital treatment, in the standardization of the staff for pain medicine there should be recommended:

- 1 specialist of pain medicine per 100,000 inhabitants by the year 2025.

The defined criteria represents a starting point and provides a development dimension in staffing for the next 7 years.

Data regarding the medicines use in Bosnia and Herzegovina during 2016. shows that pain killers (non steroid antireumatics, opiod analgetics and other analgetics) are most prescribed drugs, second to other antineoplastic agents, on third level of ATC.

<b>Group of medicines</b>	<b>Consumption in Euros in 2016. in B&amp;H</b>
<i>Chemotherapeutic agents</i>	~ 22 million
Nonsteroid antireumatics	~ 11 million
Other analgetics	~ 9 million
Opiode analgetics	~1,5 million

<b>Pain killers</b>	<b>Consumption in Euros in 2016. in B&amp;H</b>
Paracetamol	~ 9 million
Aspirin	~ 5 million
Diclofenac sodium	~ 4 million
Ibuprofen	~ 2,5 million
Paracetamol, Tramadol	~ 0,5 million
Fentanyl	~ 0,45 million
Tramadol	~ 0,44 million

Morphin

~ 0,055 million

As one of the HEPMP Project goals is to strengthen the capacity of higher education and create educational programs, the 7-year-period seems to be an acceptable time span for the development of staff for pain medicine.

The real needs of citizens regarding pain medicine are much greater than government is will to acknowledge. There are few big legal steps in front of us, in order to make government to make pain medicine recognised as a autonomous specialty.

Sincerely,

Asst Prof Jasmina Smajic, MD, PhD, Team Coordinator from Tuzla University  
Prof Nermina Hadzigraphic, MD, PhD, Team Member from Tuzla University