

HEPMP
HIGHER EDUCATION PAIN MEDICINE PROJECT

**ANALYSIS OF EDUCATION OFFER IN PAIN MEDICINE IN FEDERATION OF BOSNIA
AND HERZEGOVINA**

Updated report

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

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There is no formal education in Pain Medicine, with current legislative in Federation of Bosnia and Herzegovina. Federal Department of Public Health is the key government health institution in Federation Bosna and Herzegovina, which provides legal frame for medical profession, in term of defining requirements for medical specialization on primary, secondary and tertiary level. Pain Medicine is not recognized as a separate specialisation/subspecialisation and is studying as a part of all other medical specialisation/subspecialisation, in a form of several separate topics.

In Bosnia and Herzegovina there is The Association for Pain Therapy of B&H (UTBB&H) is a multidisciplinary professional organization. Members associations are renowned experts (anesthesiologists, physiatrists, neurologists, pharmacologists, psychiatrists, acupuncturists) and anyone who encounters pain problem. The association is a member of IASP, EFIC and EFIC Committee for Educational Support 2008/2011. The priorities of the association are raising the level of knowledge of medical staff in this area, enabling the availability of specific drugs for the treatment of pain, coordination of relevant institutions in B&H and in the world as part of pain therapy. The association has been since 2004. participant in the development of medical science "Therapy pain " in B&H. During 2007 within the project "Education of young doctors from Eastern Europe in therapy pain " the education of two young doctors from B&H in Switzerland and Austria. Furthermore, during 2008. Five doctors from B6H participated in the training "Interactive Pain Course" in Klagenfurt (Austria), and in "European School of Pain" in Sienna (Italy) two doctors.

The establishment of diagnostic and therapeutic guides, at the time of the reform of the health care system, as professional literature will contribute to better diagnostics and treatment at all levels of health. Guides should be available to all health professionals, especially in the process of organizing health care. Through family medicine in primary health care.

In this regard, in order to provide citizens with health care services of standard quality and equal content, Ministry

Sarajevo Canton Health Center was among the first in the Federation of Bosnia and Herzegovina to initiate a procedure for defining unique diagnostic and therapeutic procedures. Application of diagnostic and therapeutic guides in the treatment of certain disease is a generally accepted doctrinal approach in the world. In order to follow contemporary doctrinal attitudes in the world, expert teams were formed, which, each in their own field, gave suggestions for diagnostic and therapeutic guides, adapted situation in the country where they should be applied. These diagnostic and therapeutic guides will ensure that procedures are followed and procedures in the diagnosis and treatment of patients that are comparable modern procedures that are applied in the world and are based on consensus medical knowledge and technology. The goal of diagnostic and therapeutic guides is:

- a) Development of national therapeutic guides for physicians.
- b) Developing research habits in collecting new ones knowledge, habits and practices of prescribers and consumers.
- c) Development of a level national list of essential medicines.
- d) Development of medical and pharmaceutical curricula.
- e) Audit of internal educational programs.
- f) Revision of medical supervision procedures.
- g) Intervention programs and projects aimed at promotion rational use of drugs.
- h) Education of medical staff and patients.

i) Generating, identifying and disseminating information on strategies within the rational application of diagnostic and therapeutic procedures.

The establishment of diagnostic and therapeutic guides will facilitate the work physicians, especially family physicians in

primary health care, and enable data to be obtained for the development of a basic package of services, which can be financed through compulsory health insurance.

The Sarajevo Canton Assembly held a session 10/28/2004 passed a Decision (No. 01-05-23603 / 04) by which

the basic principles of diagnosis and treatment are determined are obliged to be applied by health workers of Sarajevo Canton. The diagnostic and therapeutic guides will be updated every two years, with the intention to update and innovate modern medical views on the treatment of certain diseases.

In 2007, the activities of the HOPE project began "87" Development of the Pain Therapy Network in B&H ". Four pain centers have been established - in Sarajevo, Banja Luka, Tuzla and Mostar - and three satellite departments for therapy

pain - in Sarajevo, Mostar and Foca. Established pain centers / units are located within university centers

and hospital. A Pain Therapy Unit has also been established at the Pediatric Clinic of the University Clinical Center

in Sarajevo. As part of this project and the project "Comprehensive pain management in rehabilitation

(CBR) in B&H "12 seminars and 20 courses were realized for doctors of multidisciplinary specialties in B&H.

More than 40 professional gatherings were held. As part of raising awareness of the need for pain treatment and code

therapists and the public, global dates on various pain entities were promoted, through working meetings, distribution of articles recommended by the IASP and EFIC, by making posters, letters distributed

medical institutions in B&H and through the media. An initiative has also been launched to resolve the law

regulation and availability of opioids and other specific drugs in pain therapy at the level of B&H and in cooperation with Federal Ministry of Health, Ministry RS Health, the Medicines Agency and the WHO. The book "Pain Therapy" was printed, as well as the Guide for the diagnosis and treatment of headaches ", brochure Fr. To the Association for Pain Therapy of B&H, instructions for "good practice "in pain therapy, leaflets and promotional materials of IASP and EFIC.

A connection has been established with all B&H institutions in health, as well as academic and research centers, health insurance institutes, ministries, and the Government. Furthermore, a connection was established with international institutions for the treatment of pain - IASP, EFIC, WIP - which recognized these activities and contributed to the development of pain therapy in B&H.

Analyzing the data regarding the lecturers about pain in undergraduate study at Faculty of Medicine of Tuzla University we found that the first knowledge about pain students can get at first studying year accepting information about nerves and receptors during Anatomy and Histology classes. First detailed lectures regarding the pain are presented at the second and third year of Faculty during Physiology and Pathophysiology (definition and transmission of

pain, type of pain). Through fourth studying year students are getting informations about pain at Pharmacology lecturers (drugs used in pain treatment), Internal medicine (pain as symptom, type and pain characteristics in different diseases) and Neurology (type of pain, pain receptors, pain transmission, treatment of pain, headache, cranial neuralgia, painful neck and throat syndromes). During fifth year there are Surgery (pain as symptom in different surgical diseases) and Oncology (carcinoma pain – characteristics, treatment) offering knowledge about pain. And, final, sixth studying year provides pain knowledge during Anesthesiology, reanimatology and intensive care (Pain and pain therapy) as well as Family medicine (Evaluation of pain in different conditions).

At the Faculty of Medicine of the University of Tuzla there is ongoing 3 years long doctoral studies, for two generation, 2016/2017 and 2017/2018, with no lectures on this topic. Also, first cycles of studies at the Faculty of Medicine does not have separate subject of Pain Medicine, and students are lectured regarding this theme in several separate subjects, from first to sixth year of study.

Doctors of various specialties from Sarajevo, Banja Luka, Tuzla and Mostar spoke in May 2008 at the Clinical Center of the University of Sarajevo at a seminar on pain therapy, which involves a multidisciplinary approach of experts of various specialties to a patient suffering from physical or mental pain. The main target group in this therapy are patients whose physical functions or mental health are threatened by inclusion in social life. Pain is a big problem in medicine, and pain therapy has proven to be very effective in treating people who suffer from chronic pain. It is suffering both for the person who endures it and for his family and the environment that suffers the consequences. Pain negatively affects the quality of life of the patient and his environment. This seminar is part of a project called "Comprehensive Pain Therapy in &H", which involves opening a pain therapy department in hospitals in Banja Luka, Mostar, Tuzla and Sarajevo.

In May 2009, The Association of Rheumatologists of Bosnia and Herzegovina and the Association for Research and Education in Rheumatology of the Republic of Turkey organized the first joint symposium entitled "Biological Therapy of Rheumatic Arthritis" in Sarajevo on Saturday. The participants of the symposium will have the opportunity to expand their knowledge in the field of rheumatology of Bosnia and Herzegovina and the Republic of Turkey from their colleagues - lecturers, eminent experts in the field of rheumatology, based on their many years of experience. Namely, steroid antirheumatic drugs are one of the most common groups of prescribed drugs in general, and the group of so-called "biological medicine" provides new hope for a complete cure to millions of sufferers around the world.

"Turkey has very significant results in the use of this therapy, so we organized a symposium with their experts. Biological therapy is a reality. These are modified drugs that act on the cell directly. They are very sophisticated and have been used in BiH since 2006. When the patient receives two infusions of the drug at intervals of 15 days, he does not take any other drug for the next year even for pain," said doc.dr. Šekib Sokolović, adding that every patient who used biological therapy had at least some benefit, and some even got to their feet. After ten years from the diagnosis, patients become incapable of work because the disease has five stages of development. In those ten years, patients become disabled if they do not receive adequate therapy. These medications help keep the disease from being active. There is a diagnosis but the disease is not progressing. In B&H, 30 patients with this disease were treated last year, and the efficiency is high. Medicines are expensive for our climate, but in 2008 there were 20 patients who were approved for this medicine for free at the expense of the Institute. It is expected to be the same case this year, as this drug is reserved for the most severe patients. The benefit of biologics is

manifested in the improvement of the patient's clinical condition (reduced pain, morning stiffness, fatigue), laboratory indicators of inflammation and slowing, stopping or in some cases improving structural changes in the joints, as seen on X-rays. The use of biological drugs greatly facilitates the lives of patients with inflammatory rheumatic diseases, because it reduces their incapacity and increases the chances of engaging in active life and reduces direct and indirect costs. After adjusting to various prognostic factors, the use of these drugs results in a 2.74-fold higher likelihood of remission of rheumatoid arthritis.

"I'm doing very well, doing all the housework. I don't know what will happen next, but I hope it doesn't get worse. Although the drugs are expensive I have to think about my family and get treated," said Azra Kreso, a patient.

Caring for patients with severe rheumatoid arthritis is one of the biggest burdens on the health care system. While in Europe as many as 75 percent of the population over the age of 65 suffer from some form of rheumatoid arthritis, in Bosnia and Herzegovina the percentage of patients is slightly lower, but amounts to 770,000 people over the age of 40.

"There are no accurate statistics of patients with this disease in B&H, because we must always take the diagnoses established here with reservations. We expect to have statistics of patients only in about five years, because the statistics are not in line with European standards," said Dr. Emir Talirevic. , the host of the symposium organized by the Agram Concern, Sunce Polyclinic.

During April 15 and 16, 2010. was held in Ilidza Hotel Hollywood in Sarajevo 1st Congress "Pain Therapy B&H" with international participation. Name of the congress was "Exchange of experiences in pain therapy B&H-region-world ". On The meeting was attended by foreign and domestic experts in the field of pain therapy, 52 lectures were held, an international course on pain, 34 posters were exhibited on various thematic units, with 11 stands of pharmaceutical companies. In total, about 160 were present participants from Croatia, Serbia, Slovenia, B&H, Bulgaria, Albania, Great Britain, United Arab Emirates Emirates and the United States. The meeting achieved the set goals exchange of experiences of experts, education of young doctors, promotion networks of associations for pain therapy and improving cooperation with legislation. Experience in the implementation of best practice and raising awareness of the importance of acute and chronic pain problems. It should be noted that despite all the efforts from the area B&H responded to a minimum number of doctors and other medical staff. They spoke at the opening ceremony president of the Therapy Association pain B&H (UTBB&H) prim. Dr. Amira Karkin-Thais and Assistant Federal Minister of Health of FB&H Dr. Goran Circassian. They are an opening with their speech enlarged and Ambassador of Japan Futao Mutai and Austrian Ambassador to B&H Donatus Köeck, as well as prof. Dr. Gerald F. Gebhard, President of the IASP (International Association Study of Pain), Giustino Varrassi, President of EFIC (European Federation of International Chapters) and Serdar Erdin, President WIP (World Institute of Pain). Giustino Varrassi pointed out the meaning of defining pain as a disease, not a symptom, to make it recognized the institutions they create health policy. Great interest participants were aroused by the International an interactive course by Dr. Reinhard Sittle, whose final materials are recommended by state and interstate associations (EFIC, WIP). Through the topic "Management hurts and services "the project" Development of a pain therapy network in B&H "was promoted as part of the National Strategy program health of the Federation and RS. With the presentation of "PCA analgesia", participants were given the opportunity to follow the method computerized analgesic techniques with the help of the PCA pumps they use anesthesiologists and therapy teams pain. The topic of "Education in pain therapy" highlighted is fragmented insufficiency of

knowledge and skills in treating pain and diversity between neighboring countries. Theme Faculty of Dentistry in Zagreb "Orofacial pain and TM joint diseases" provoked a fruitful discussion in the circles of maxillofacial surgeons from Sarajevo. News in pain therapy as and psychological / psychiatric effects on pain and painful psychiatric conditions are presented in presentations from the USA, Turkey, Great Britain and Austria. Authors of the three best posters The IASP awarded three books from the field of pain treatment: Emerging Strategies for the Treatment of Neuropathic Pain, Spinal Cord Injury Pain: Assessment, Mechanisms, Management and Pain Management for Older Adults: A Self-Help Guide. It was also distributed to the participants professional material: book of abstracts on 145 pages, Headache Guide, IASP promotional material and membership application, and announcement of the upcoming IASP Congress on Pain in Montreal. Congress has achieved its goals goals of exchanging expert experiences in the field of pain therapy, education young doctors, network promotion associations for pain therapy and improving cooperation with legislation in the field of drug-related regulation in pain therapy. It was exchanged experience in implementing the best practices and raising awareness of the importance problems of acute and chronic pain. It was also concluded that management improvements must be implemented jointly educators, medical staff, health funding organizations, policy makers and the whole community along with recommendations of WHO, IASP, EFIC, ACMP (Access to Controlled Medication Program) and the American Academy of Pain Medicine. Big step done during the congress should motivate new shifts despite the political and deficient political barriers in B&H drug law, unavailability opioids and financial adversity. prim. Dr. Amira Karkin Tais, President of UTBB&H and Organizational of the Congress Committee

In February 2014, a seminar entitled "New approaches in pain therapy" was held for the employees of the General Hospital. This seminar was realized within the HOPE'87 project "Comprehensive Pain Management in BiH". The main goal of the project is education in pain therapy in BiH and the establishment of development centers for multidisciplinary and standardized treatment. The ultimate goal is to provide patients with pain with a better quality of life. The project was supported by the Japan International Cooperation Agency, as well as by the Federal Ministry of Health. Dr. Davorka Matković; "Chronic and back pain" presented by Prim. dr. Amira Karkin-Tajs and "Postoperative pain" presented by doc. Dr. Sanja Marić. Pain is a subjective, unpleasant, individual feeling that can occur as a result of physical tissue damage, psychological reaction to that damage and previously acquired experiences.

Pain is also a protective mechanism whose function is to make the body aware of the danger and react to remove the painful irritation. If the painful irritation cannot be eliminated, then chronic pain occurs which no longer has a protective function but additionally burdens the patient. The body's response to a painful stimulus is manifested by a series of negative reactions. We are talking about a multisystem negative response that leads to a worsening of the general condition, poorer treatment results and a worsening of the quality of life. That is why it is very important to remove the pain in a timely and valid manner. Pain management professionals come from all fields of medicine because pain is present everywhere, and the most common are anesthesiologists, neurologists, physiatrists, psychiatrists, and palliative care physicians.

On December 5th 2015 the University Clinical Center Tuzla, Center for Palliative Care in cooperation with the Tuzla Canton Medical Chamber and Initiative for Introduction of Palliative Treatment in B&H hosted the 2nd Symposium "Pain Control and Palliative Medicine".

This Symposium was a great opportunity to share experience on the best pain management, and was excellent in regards to discussion on acute postoperative and chronic malignant pain.

At the opening ceremony, the attendees were addressed by Ass. Prof. Samir Husić, head of the Centre for Palliative Care and president of Initiative for Introduction of Palliative Treatment in B&H, who on the occasion pointed out that the Centre has the absolute support of the management of the UKC Tuzla when it comes to the development and support of palliative treatment and improvement of procedures and guidelines of pain management, but that the high state authorities failed to recognize the importance of adopting a national strategy for palliative care development in Bosnia and Herzegovina.

Director of the University Clinical Center Tuzla, Ass. Prof. Nešad Hotić expressed his satisfaction that the UKC Tuzla has organized 25 national and international scientific meetings and gathered nearly 10,000 health professionals in 2015. According to him, the UKC Tuzla actively participates in all activities in which the ultimate goal is the improvement of the Tuzla Canton health care system.

Ass. Prof. Munevera Bećarević, president of the Commission for Education of the Tuzla Canton Medical Chamber, Dr. Maida Mulić, director of the Tuzla Canton Public Health Institute and Health Minister Dr. Bahrudin Hadžiefendić also addressed attendees. The Symposium was dedicated to specialists and residents in Family Medicine, Trauma, Oncology, Radiotherapy, Anesthesia and Resuscitation, Neurology and all other interested in the topics presented.

On the 09/06/2016 in Primary health care center Sarajevo, in the period from 1 pm to 3 pm, an education "Musculoskeletal pain and practical work" was held for all doctors who deal with this issue, such as family medicine specialists, doctors working in palliative care, specialists neurologists, specialist physiatrists and others.

The training was organized by the Association of Pain Therapy of Bosnia and Herzegovina, and the topics were:

- Physiology and transmission of pain, examination of pain, evaluation (scales), diagnosis and principles of therapy
- Rheumatic pain syndromes and therapy
- Chronic nonspecific back pain, warning signs (red and yellow flags) and therapy
- Chronic pain syndromes: myofascial pain syndrome, painful sy of the upper extremities - neck, shoulder, arm and therapy

The lecturers were Dr. Amira Karkin-Tais (president of the Association), prof.dr. Dijana Avdić (dean of the Faculty of Health Studies UNSA) and associates of the Faculty doc. Amila Jaganjac and doc. Lana Lekić.

By the decision of the Medical Chamber of Sarajevo Canton, the course was scored with 7 points. The training was attended by 20 doctors of various profiles from OJ Centar, OJ Novo Sarajevo, OJ Stari Grad, OJ Vogošća, OJ Specialist-consultative activity.

Every month Medical Chamber of Tuzla Canton hold at least one lecture regarding Pain Medicine. In October 1st 2018, a lecture entitled „Spinal anesthesia“ was held in General Hospital Gračanica, by MD Amra Aljukić Ćosićkić, anesthesiologist. She told that Spinal anesthesia is a neuroaxial anesthesia in which a local anesthetic is applied to the subarachnoid space of the spinal cord, which leads to blocking of painful stimuli in the area that innervate anesthetized nerves. This form of anesthesia is especially suitable for surgical procedures that are performed at approximately below the level of the navel, such as the surgery of the hernia, hemorrhoids, caesarean section, a multitude of urological procedures, and almost all surgeries on the lower extremities, including the knee arthroscopy, implantation of the artificial hip and amputation leg. When performing this form of anesthesia, a local anesthetic is applied in a space

between the two vertebrae using a thin needle. During this procedure the patient is sitting or lying on the side, and the speed of the drug depends on the patient's co-operation and the anatomy of the spine. She emphasized that spinal anesthesia typically works for about 2-3 hours, after which the patient begins to return the sensation in an anesthetized area.

In September 2018, a lecture entitled „Interferential Current therapy“ was held in Primary Care Health Center Srebrenik by MD Zihir Suljić. He told that electrotherapy is a procedure in which the electric current is used for the purpose of treating painful conditions. Generally speaking, electrotherapy reduces pain, removes the inflammation and calms inflammatory processes.

Physiological, under the electrodes or in the zone of projection, the following physiological effects occur: vasodilation (expansion of the blood vessels), hyperaemia (redness of the skin with the presence of heat), improves the exchange of the substance in the cell and normalizes the pH, reduces the sensitivity of nociceptors (sensory receptors, thus reducing pain), tissue healing, muscular contraction increases.

In September 2018, a lecture entitled „Short acting intravenous anesthetics“ was held in General Hospital Gračanica, by MD Amra Aljukić Čosićkić, anesthesiologist. She told that anesthesiologist combines various types of anesthetics to induce short acting anesthesia, maintenance of anesthesia, and analgesia and paralysis of musculature. Introduction to anesthesia is most often done with the use of a drug in the vein, which leads to a loss of consciousness for a few seconds. Prior to all potentially painful procedures in the vein, strong painkillers are also given, and if necessary, medications for muscle paralysis are given, which is necessary for certain anesthetics and surgical procedures.

In August 2018, a lecture entitled „Back pain“ was held in Primary health care center Gradačac by MD Sanja Dedić. She told the first drug recommended is acetaminophen or NSAIDs (but not aspirin), and for most people this is sufficient. Standard doses of acetaminophen are very safe; however, very high doses can cause problems with the liver. NSAIDs are more effective than acetaminophen for acute episodes. However, they carry a higher risk of side effects, including: kidney failure, stomach ulcer, and even maybe heart problems. Therefore, NSAIDs are only in second place, behind acetaminophen and are recommended only when these are not helpful first. NSAIDs are available in several different classes; There is nothing to recommend the use of COX-2 inhibitors before another type of NSAID with respect to efficacy. Given the safe use of the best, the best could be naproxen. Muscle relaxants may also be useful. Opioids such as morphine can also be used if the pain is not effectively treated by the previous therapy.

In August 2018, a lecture entitled „Headache – diagnostics and treatment“ was held in Primary health care center Lukavac by MD Asim Đuzić. He told that analgesics such as paracetamol and acetylsalicylic acid, or non-steroidal analgesics such as ibuprofen, diclofenac or naproxen, are used in the treatment of acute attacks of tension headaches. It is important to emphasize to the patient that the medicine should be taken at the beginning of the headache and at a sufficiently high dose, because the failure of therapy is often responsible for inadequate doses of the drug. However, the daily taking more than 10 analgesics for more than three months leads to the development of headaches caused by excessive medication. Therefore, prophylactic therapy is indicated in chronic tension headaches.

In May 2018, a symposium entitled „A Multidisciplinary Approach to Pain Management“ was held at the Institute for NIR KCUS. The symposium was attended by physicians, anesthesiologists, and medical staff of KCUS and other health care facilities. The organizers of this scientific conference are the Institute for NIR and the Clinic for Anesthesia and Resuscitation KCUS, and the director of the Discipline for Science and Teaching, Prof. Dr. Enra Mehmedika -

Suljić and the Head of the Clinic for Anesthesia and Resuscitation KCUS, Prim.Dr. Amela Katica-Mulalić.

Prim. Dr. Amela Katica Mulalić thanked the management of KCUS for the support in organizing the Symposium, and pointed out that this is a great opportunity to exchange experiences and knowledge with colleagues, but also an opportunity to follow modern trends in pain therapy.

"2018 has been declared the year of pain therapy. Today, we have colleagues who deal with different areas of medicine, because pain therapy involves a multidisciplinary approach. At the Clinical Center of the University of Sarajevo, we use a large number of therapeutic procedures, which significantly affects the reduction and elimination of pain. The long-term goal of pain therapy is to improve the quality of life of patients, but also their families and caregivers "- said Dr. Katica - Mulalić.

Prof. Dr. Enra Mehmedika - Suljić addressed the gathering on behalf of the Director General of KCUS, Prof. Dr. Sebija Izetbegović, and gave an introductory lecture. Prof. Dr. Mehmedika - Suljić stated that KCUS is the first institution in BiH that has realized the need for an outpatient clinic in which strong and exhausting pain in patients will be alleviated and even completely eliminated.

"In September 2017, at the Clinic for Anesthesia and Resuscitation, we opened an outpatient clinic for pain therapy. So far, we have taken care of 300 patients from all over Bosnia and Herzegovina in this clinic. We had the opportunity to talk to patients during therapy. Their stories are very similar. All of them suffered unbearable pain for months and even years, which they could not control. They found relief in the Pain Therapy Clinic and have only words of gratitude and praise. The topics of today's Symposium are very useful for everyday work with patients who suffer from any type of severe pain "- said Prof. Dr. Mehmedika - Suljić.

The Clinical Center of the University of Sarajevo is open for all types of cooperation and professional development, in order to provide better health services to patients.

In June 2018. a lecture entitled „Terminal cancer ill patient pain management“ was held in General Hospital Gračanica“, by MD Nermin Slamnik. He told that the essential drugs for the treatment of malignant pain are analgesics. We divide them into three basic groups: non-opioid, opiate and adjuvant analgesics. The procedure for their implementation is the World Health Organization's analytical scale. In order to achieve a better effect of removing malignant pain, apart from analgesics, adjuvant analgesic drugs, anesthetic and neurosurgical procedures, palliative radiotherapy and palliative surgical procedures should be included in the treatment. Psychological support for both the patient and the family should also be provided, as depression, anxiety and other symptoms are aggravating the experience of total pain.

In september 2018. a lecture entitled „Spinal anesthesia“ was held in General Hospital Gračanica“, by MD Almir Sakic. He told that spinal anesthesia belong to regional anesthesia that block certain nerves at the level of the spinal cord, thereby ensuring the pain of certain parts of the body - a necessary condition for performing surgical procedures, but also for the treatment of pain. They are most commonly used in the lumbar spine, but also at other levels of the spine, and are used in orthopedics, thoracic, abdominal, urological surgery, gynecology, and in particular in maternity care. It is important that they can be used in both children and adults, and their special characteristic is that, in addition to pain, they also provide muscle relaxation of the selected body region.

In April 2018. a lecture entitled „Pain management“ was held in Primary health care center Čelić by MD Nihad Nukić. He told that the elimination of pain in patients is one of the most important, most urgent, but most often the most complicated tasks. The importance of team work (a doctor,

a nurse / technician, a psychotherapist, etc.) is of a great value for the doctor. The World Health Organization (WHO) recommends scales of pain in achieving analgesia. It is first described for the treatment of tumor pain, but it can be used by medical workers as a general principle when dealing with the analgesia of any type of pain. In treating chronic pain, it was associated with malignant or benign processes, the WHO 3-step pain scale provide guidelines for selecting the type and increasing the amount of analgesia. The exact drugs recommended will be different from country to country and in individual treatment centers, but the following provides an example of WHO's approach to treating chronic pain with drugs. If, at any time, the treatment of defects in achieving adequate pain relief, then the doctor and patient move to the second step.

In february 2018. a lecture entitled „Headache“ was held in General Hospital Gračanica“, by MD Damir Dževdetbegović. He told that often taking painkillers to help reduce headaches can create a vicious circle and cause even more pain. People with tension headaches and migraine abuse of analgesics worsen their condition and new seizures.

In february 2018. a lecture entitled „Lower back pain“ was held in Primary Health Care Center Banovići, by MD Vahidin Pirić. He told that NSAIDs are the first choice drugs in the treatment of poor to moderately severe acute and chronic pain. Their effect is analgesic, antipyretic, antiinflammatory and antitrymbocytic. They are most used to alleviate headache and pain in the musculoskeletal system, and lower back pain among others. In severe intensity pains, they are used together with opioids. They do not cause tolerance and dependence, but the characteristic of their application is the phenomenon of achieving a plateau - a maximum effect that can not be exceeded by increasing the dose.

The PCA method in the treatment of pain in patients was introduced at the Clinic for Anesthesia and Resuscitation. It is a patient-controlled analgesia. Analgesia is the removal or absence of pain without loss of consciousness. This method is applied with the help of a PCA pump and is currently used only at the Clinic for Anesthesia and Resuscitation of the Clinical Center of the University of Sarajevo. According to the head of the Clinic, Dr. Amela Katica Mulalić, so far 300 patients have been examined in the Pain Therapy Clinic.

"Thanks to the support and understanding of the management, pumps and the necessary equipment for the introduced PCA methods were procured at our clinic. It is a method when the patient actively participates in the control of analgesia and pain relief, which allows the patient to independently receive an analgesic according to the intensity of pain. It is left to the patient to determine the dosing interval within certain limits, and the dose is given that corresponds to the real needs "- stated Dr. Katica Mulalić.

PCA pumps provide the possibility of programming, so that the patient can determine when and how much analgesics he will receive. It is used in patients with malignant and neuropathic pain, as well as postoperatively.

"The benefits of the PCA method are controlled continuous analgesia, faster recovery, and a more positive attitude towards clinical treatment and pain therapy, which significantly contributes to faster, better and safer services" - said Dr. Katica Mulalić.

As a part of continous medical education, during 2018 (and previous years), the pain management was discussed at several meetings and in a form of online lectures, available at www.cme.ba (Chronic Cancer Pain)

Medical Chamber of Tuzla Canton every month has several lectures on different topics, among them and Pain Medicine.

The University Clinical Center Tuzla has started the First School of Obstetric Anesthesia in the framework of the cooperation between our hospital and the non- profit organization Kybele.

During their visit to Tuzla, Kybele team members Ferne Braveman, MD, Yale University School of Medicine, New Haven, USA, Prof. Dr. Edward Riley, anesthesiologist, Stanford University Medical Center, USA, Kelly Fodoruk, MD, Stanford University Medical Center, USA and Ivan Veličković, MD, Obstetrical Anesthesiology, SUNY Downstate Medical Center, Brooklyn, New York, USA will provide hands-on training in obstetric anesthesia techniques, with emphasis on using anesthesia during labor and delivery, for our team of anesthesiologists.

On the occasion, Dr. Ivan Veličković from SUNY Downstate Medical Center, Brooklyn, New York said that Kybele is a non-profit humanitarian organization dedicated to improving childbirth safety worldwide. The organization brings US, Canadian, Australian and European healthcare professionals together to work in teams that travel to host countries. Kybele team members donate their time and experience to provide education and training in techniques that improve healthcare safety. Kybele team visited Bosnia and Herzegovina and the region eight times, and the city of Tuzla twice.

The chief of anesthesia at the Clinic of Gynecology and Obstetrics Prim. Dr. Senida Keser explained that there are two types of regional anesthesia, spinal and epidural, which provide numbness or loss of sensation of certain parts of body. The main goal of introducing regional anesthesia is to be used during a surgical procedure such as cesarean delivery. During this school of anesthesia, our doctors will learn about the application of epidural anesthesia, spinal anesthesia and combined spinal epidural anesthesia. Prim. Dr. Keser also explained that spinal anesthesia involves the injection of a local anesthetic through the dura mater into the spinal space through a fine needle to act on the nerves of the spinal cord. In epidural anesthesia a drug is injected into the epidural space located outside of the dural membrane, which means that there is no contact with the spinal canal. Epidural anesthesia is considered to be safer and more subtle compared to spinal anesthesia, and it is also more commonly used. Moreover, Dr. Keser pointed that not all women are good candidates for these types of anesthesia. An appropriate preoperative anesthesia assessment and evaluation is necessary for all candidates prior to initiation of neuroaxial anesthesia.

The First School of Obstetric Anesthesia underwent on April 2017 at the University Clinical Center Tuzla, and was organized within the cooperation of the University Medical Center Tuzla and the American organization Kybele. During the school, doctors stayed at the University Clinical Center Tuzla: Dr. Ferne Braveman, Yale University School of Medicine, New Haven, USA, prof. Dr. Edward Riley, Anesthesiologist Stanford University Medical Center, USA, Dr. Kelly Fodoruk, Stanford University Medical Center, USA and Dr. Ivan Veličković, Obstetrical Anesthesiology, SUNY Downstate Medical Center, Brooklyn, New York, USA. During their stay, the American team of doctors conducted training of anesthesiologists at the University Medical Center Tuzla in the field of obstetric anesthesia, with an emphasis on regional anesthesia and analgesia in childbirth.

Prof. Dr. Fahrija Skokić, Assistant Director for Medical Affairs at the University Clinical Center Tuzla expressed satisfaction with the established cooperation between the University Medical Center Tuzla and the organization Kybele, which enabled the introduction of obstetric anesthesia. "Childbirth is a magnificent event in the life of every woman and we are now able to humanize all the pain that accompanies this act. The Clinic for Anesthesiology and Resuscitation has long recognized and started with the introduction of these methods, but for objective reasons they have not been realized so far", said prof. Dr. Skokić. Head of the Clinic for Anesthesiology and Intensive Care UKC Tuzla, prof. Dr. Semir Imamović pointed out that he hopes that regional

anesthesia and painless childbirth will become part of the regular procedures of this clinic. Dr. Ivan Veličković from SUNY Downstate Medical Center, Brooklyn, New York, said that Kybele is a non-profit humanitarian organization that has been dedicated to improving motherhood and childcare for 15 years. Kybele Inc. brings together American, Canadian, Australian and European health professionals into teams. Kybele team members donate their time and experience to provide hands-on training in techniques that improve the quality of health care. They stayed in Bosnia and Herzegovina and the region eight times, of which twice in Tuzla. First School of Gynecological Anesthesia (2) Head of Anesthesia, Department of Gynecology, Prim. Dr. Senida Keser explained that spinal and epidural anesthesia belong to regional anesthetics that provide painlessness to certain parts of the body. The goal of the introduction of regional anesthesia is to increase the number of caesarean sections that would be performed in this anesthesia, in addition to the secured birth. During the School of Obstetric Anesthesia, training was provided in the application of epidural anesthesia, spinal anesthesia and a combination of epidural and spinal anesthesia. Prim. Dr. Keser explained that spinal anesthesia is performed with a special needle, thinner than standard ones, which is inserted through the dura into the spinal space and through which a local anesthetic is applied that acts on the spinal cord nerves. In epidural anesthesia, the anesthetic is applied to the epidural space of the spine outside the hard membrane, which means that there is no direct contact with the spinal space. Epidural anesthesia is considered more subtle and safer compared to spinal anesthesia, and is used more often. Prim. Dr. Keser also emphasized that not all mothers are candidates for these methods, and the decision can be made only after anesthesiological examination, because some patients have diseases that require certain approaches.

The non-profit organization Kybele in cooperation with the University Clinical Center Tuzla, Clinic for Gynecology and Obstetrics organized the Second School of Obstetric Anesthesia in the period of 25-28 September, 2017. During their visit to Tuzla, Kybele team members provided hands-on training in obstetric anesthesia techniques, with emphasis on using anesthesia and analgesia during labor and delivery, for our team of anesthesiologists. In addition to practical training, the participants of this intensive school had an opportunity to hear several lectures by eminent experts in this field Dr. Gillia Abir, Dr. Melissa Kreso, Dr. Oleg Turcot and Dr. Ivan Veličković. Prim. Dr. Denis Odobašić will give a review of experiences gained during the first School of Obstetrics Anesthesia that was held in April, 2017.

On the occasion, Dr. Ivan Veličković from SUNY Downstate Medical Center, Brooklyn, New York said that Kybele is a non-profit humanitarian organization dedicated to improving childbirth safety worldwide. The organization brings US, Canadian, Australian and European healthcare professionals together to work in teams that travel to host countries. Kybele team members donate their time and experience to provide education and training in techniques that improve healthcare safety. During this school of anesthesia, our doctors learned about the application of epidural anesthesia, spinal anesthesia and combined spinal epidural anesthesia. The chief of anesthesia at the Clinic of Gynecology and Obstetrics Prim. Dr. Senida Keser explained that spinal anesthesia involves the injection of a local anesthetic through the dura mater into the spinal space through a fine needle to act on the nerves of the spinal cord. "In epidural anesthesia a drug is injected into the epidural space located outside of the dural membrane, which means that there is no contact with the spinal canal. Epidural anesthesia is considered to be safer and more subtle compared to spinal anesthesia, and it is also more commonly used." she said.

The University Clinical Center Tuzla hosted the Third School of Obstetrics Anesthesia that was organized in the framework of the cooperation between our hospital and the non-profit

organization Kybele. During their visit to Tuzla, Kybele team members Prof. Dr. Medge Owen, Ass. Prof. Mellisa Potisek and Prof. Dr. Shahla Namak will provide hands-on training in obstetric anesthesia techniques, with emphasis on using regional anesthesia during labor and delivery, for our team of anesthesiologists.

On the occasion, Prim.Dr. Senida Keser, chief of anesthesia said that since April 2017, when regional anesthesia was introduced, 10 anesthesiologists of Clinical Center Tuzla have been educated and 300 procedures have been performed. Kybele is a non-profit humanitarian organization dedicated to improving childbirth safety worldwide. The organization brings US, Canadian, Australian and European healthcare professionals together to work in teams that travel to host countries. Since 2004 Kybele team members have conducted training in both Ob/Gyn and anesthesiology for health professionals in Armenia, Brazil, Croatia, Egypt, Georgia, Ghana, Mongolia, Romania, Serbia, Turkey and Vietnam.

The University Clinical Center Tuzla hosted the Fourth School of Obstetrics Anesthesia that is organized in the framework of the cooperation between our hospital and the non-profit organization Kybele. During their visit to Tuzla, Kybele team members will as before provide hands-on training in obstetric anesthesia techniques, with emphasis on using regional anesthesia and analgesia during labor and delivery, for our team of anesthesiologists. Dr Veličković expressed his satisfaction with the number of births in which epidural or spinal anesthesia was used at the Clinic for Gynecology and Obstetrics, University Clinical Center Tuzla.

Head of anesthesia Prim.Dr. Senida Keser said that in one and a half year period 15% of women chooses to get anesthesia during childbirth and the procedure is gaining more interest every day among women. In addition to practical training, the participants had an opportunity to hear professional lecturing in this medical field. Difficult / Failed Intubation in an OB Patient was lecture by Dr.Gillian Abir, Clinical Associate Professor at Department of Anesthesiology, Stanford University, Stanford, CA, USA. The second lecture Single Shot Spinal for Labor Analgesia gave Dr. Ivan Velickovic, Assistant Professor of Anesthesiology at Department of Anesthesiology, SUNY Downstate Medical Center, Brooklyn, NY, USA.

The Fifth School of Obstetric Anesthesia held on April 2019, at the University Clinical Center Tuzla, and was organized in cooperation with the University Medical Center Tuzla and the American organization Kybele, which is dedicated to improving the conditions of childbirth in the world. On that occasion, eminent experts in the field of obstetric anesthesia, prof. Dr. Edward Ed Riley, Dr. Jalal Nanji and Dr. Neil Kalariya from Stanford University, USA. During their stay, the American team of doctors held a three-day workshop in the practical part and expert lectures on topics in the field of obstetric anesthesia, with an emphasis on regional anesthesia and analgesia in childbirth. Participants were anesthesiologists from Tuzla, Sarajevo, Mostar, Bihać, Zenica, Orašje and Travnik. The leaders, as well as the students of the school, assessed it as very successful, and expressed hope that this type of education will continue in order to increase the percentage of caesareans performed under spinal anesthesia and thus contribute to safer and easier childbirth. They also stressed the importance of closer cooperation of anesthesiologists with gynecologists, neonatologists and midwifery nurses in order to include regional anesthesia in standard procedures for childbirth in health centers in BiH.

Prim. Dr. Senida Keser, Head of Anesthesia, Department of Gynecology, UCC Tuzla, said that anesthesiologists are working intensively on instructions for all pregnant women, future mothers, in which the administration of epidural and spinal anesthesia will be explained in a simple and understandable way, in accordance with the guidelines of obstetric anesthesiologists. during childbirth. According to her, the four schools of obstetric anesthesia held so far have given

excellent results, because the percentage of caesarean sections performed under spinal anesthesia at the Clinic for Gynecology and Obstetrics at the University Medical Center Tuzla exceeded 40 percent, and childbirth pain relief 16 percent. Dr. Keser also emphasized that not all mothers are candidates for these methods, and the decision can be made only after an anesthesiological examination because some patients have diseases that require certain approaches.

The Sixth School of Obstetric Anesthesia underwent at the University Clinical Center Tuzla on September 2019, organized within the cooperation of the University Medical Center Tuzla and the American organization Kybele, which is dedicated to improving the conditions of childbirth in the world. On that occasion, eminent experts in the field of obstetric anesthesia from the USA visited the University Clinical Center Tuzla. During their stay, the American team of doctors held a series of workshops in the practical part and professional lectures at which topics from the field of obstetric anesthesia were discussed, with an emphasis on regional anesthesia and analgesia in childbirth. The participants were anesthesiologists from Tuzla, Bihać, Zenica, Travnik and Sarajevo. The leaders, as well as the students of the school, assessed it as very successful. Ivan Veličković, a specialist anesthesiologist at the Sana Hospital in Brooklyn, New York, pointed out that the University Clinical Center Tuzla has become a regional center for the training of anesthesiologists for childbirth analgesia and regional anesthesia for caesarean section. "After five schools and this sixth, doctors from the University Clinical Center Tuzla were trained to perform over 1000 procedures in regional anesthesia. Regional anesthesia was given to cesarean section patients and patients who gave birth naturally. Novelties have also been introduced in postoperative pain therapy where spinal and epidural opioids have been introduced," said Dr. Veličković. According to Prim. Dr. Senida Keser, Head of Anesthesia, Department of Gynecology, University Medical Center Tuzla, the percentage of cesarean sections performed under regional anesthesia is 52 percent, and labor pain relief 16 percent. Dr. Keser also emphasized that not all mothers are candidates for these methods, and the decision can be made only after an anesthesiological examination because some patients have diseases that require certain approaches. Dr. Senada Čaušević and Zenica and Dr. Aida Čorbeg from Travnik expressed their satisfaction with the concept of the school, especially the practical work in which all participants had the opportunity to apply regional anesthesia. The school leaders emphasized the great importance, but also the satisfaction of the cooperation of anesthesiologists with gynecologists, neonatologists and midwifery nurses at the Clinic for Gynecology and Obstetrics of the University Medical Center Tuzla, because the school's goal is to include regional anesthesia in standard childbirth procedures

As part of the celebration of the International Day of Pain Therapy, a Symposium was held in May 2019 in KCUS in order to educate employees and students of the UNSA Faculty of Medicine. The head of the Amela Clinic for Anesthesia and Resuscitation, Katica Mulalić, pointed out that the Symposium is extremely important given the daily new knowledge about the pathophysiology, diagnosis and treatment of pain.

"Guided by the fact that inadequate application of therapeutic procedures is the main reason for unsuccessful treatment, we have been organizing a Symposium on the topic of pain therapy for the second year in a row. Within the Symposium, with a multidisciplinary approach, we presented the latest knowledge on treatment, pathophysiological mechanisms, clinical, psychological and social aspects of pain. Unremoved and severe pain has various psychological, physical and social consequences, and a negative effect on the outcome of treatment. By looking at the problem in detail and seriously, we always find the most effective treatment therapies. Pain

analysis should be as detailed as possible, in order to apply the most effective therapy "- said Dr. Mulalić.

KCUS Director General Sebija Izetbegović pointed out that the opening of the Pain Therapy Clinic at the KCUS Clinic for Anesthesia and Resuscitation, two years ago, significantly improved the living conditions of patients who face pain on a daily basis.

"The Ambulance takes care of the most serious oncological and neurological patients, RVI and other people who suffer severe pain due to primary diseases. Prior to the opening of the Ambulance, patients walked from one facility to another in search of relief. In this way, the sick and members of their families also suffered, who watched the suffering of their loved ones and could not help them. Pain medications used in home use are not strong enough to relieve the pain suffered by chronic patients. KCUS strives to be an institution that will facilitate its services to patients and their families, through the introduction of modern procedures and treatment protocols, and monitoring innovations in all areas of medicine. Through detailed analysis of all aspects of treatment and services provided in our institution, and strategic projects in the last three and a half years, we have significantly improved the quality health services. As the largest and oldest health institution, KCUS is the mainstay of building a strong and orderly health system in BiH, "said Izetbegović.

Federal Public Health Department is the key institution for suggestions and initiatives regarding formal subspecialisation of Pain Medicine, and in a future period it will be adressed with formal request to make all legal steps needed to make this type of education real.

Sincerely,

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

Prof Selmira Brkić, MD, PhD, Team Member from Tuzla University