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posluchárna

VITA NOSTRA REVUE

STUDENT VOLUNTEERS DURING A PANDEMIC – MICHAL ANDĚL: MY LIFE WITH VIRUSES – JIŘÍ BENEŠ: CANCELLATION OF THE BALL – JANA ŠEBLOVÁ: MY PANDEMIC SPRING 2020 – ABOUT HOMELESSNESS AND COVID-19 – STORIES FROM ITIBO



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Editorial

Dear readers of Vita Nostra Revue, colleagues, dear students,

we present you the double issue of our magazine in 2020. The main reason for the delay is the situation caused by the coronavirus pandemic. A large part of our magazine is also devoted to this actual topic.

The whole set of texts on coronavirus starts with an article by Tomáš Sychra and is dedicated to our medics who helped during the coronavirus crisis. The article is accompanied by a rich photographic documentation. The following text was written by Prof. Anděl.

Prof. Anděl deals with the history of important infectious diseases after the Second World War. He solves their medical and social problematics on his own cases and personal experiences including the possibilities of vaccination. We also present all texts in English so that students of the English curriculum can read them.

I really appreciate the article by Prof. Jiří Beneš, who analyzes the situation in the beginning of the pandemic at our faculty and shows its plausible solution, including the cancellation of the ball. It is very important that he emphasized the absolutely crucial role of physicians and nurses in solving covid-19, but also the contribution of our medics as important collaborators in the practical management of the coronavirus crisis. Students of the 3rd Faculty of Medicine Charles University were the first who organized and provided this assistance. Students of medical and other faculties joined them after that. If we look at the "whole history" of covid-19, it is clear that it has gone through many pitfalls, successes and mistakes. But the dedication and commitment of doctors, nurses and medics played a decisive positive role. So I am very surprised by the voices from the Ministry of Health that our healthcare system is completely in order. It's not. Among other things, the problem of payments in relation to the hourly monthly pension and the subsequent leave after night service is not solved. If this principle was strictly kept, there would be just few physicians left for daily operation in clinics.

The statements of the Minister about the average salary of 94 000 CZK at workplaces managed by the Ministry of Health of the Czech Republic are also quite strange. In our family 11 doctors worked or have been working, the last twelfth is studying the first year of the Faculty of Medicine, Charles University in Pilsen. Two of them were and are heads of clinics at the Faculty of Medicine, Charles University in Pilsen. Others hold various positions, mostly leaders, but we also have one junior secondary. So I know the issue. I think that politicians should weigh words in general statements. Otherwise, it sometimes seems that someone wants to harm us (perhaps unknowingly).

It is always very important that people who are in direct contact with problems and their solutions write about their specific experience. This valuable information and experience is communicated to us by a member of our editorial board, Dr. Jana Šeblová. Her articles are very funny and well written, even with English humor.

Our editor-in-chief, Jolana Boháčková, summarized the knowledge about the mental health of the population, which was gained by the staff of the National Institute of Mental Health in Klecany as an accompanying phenomenon of the pandemic. The article is called The Coronavirus Epidemic and Mental Health. It is valuable that NIMH employees are involved in the international research. This issue will certainly have a post-coronavirus projection.

Colleague Václav Melenovský writes about the Medics in the Street project in relation to covid-19 and the role of housing.

The series about covid-19 is concluded with an article by Prof. Anděl - Vaccine, Cherry Orchard and New challenges. The article describes the development of vaccine production at ÚSOL (Institute of Sera and Vaccines). Unfortunately, it was canceled a long time ago and its restoration is not being talked about. I read with the same mixed feelings as Prof. Anděl that the Ministry of Health had commissioned institutes directly managed by him to prepare the SARS-CoV-2 coronavirus vaccine. I have been working in science for a long time and I am well aware that no invention can be ordered from above. Everything has to be worked on for a long time.. E.g. there is no virologist in ÚHKT who would work on this issue. The last was Prof. Vladimír Vonka, who wrote a well-founded and well-arranged article for the Revue of the Czech Medical Academy (2020/16, 5-9) on the issue of covid-19 in the Czech Republic. Employees of the ASCR, such as the Institute of Molecular Biology (Prof. Hořejší) or the Faculty of Science of the University of South Bohemia (Prof. Grubhofer, Prof. Lukeš) should be involved in any research. It is true that many discoveries were made by chance, but only when the discoverers had been working on the issue (Pasteuer: "Chance favors the prepared mind.."). Or, as Prof. Bricklayer (USA), we wish all those who come up with something great success, but they must be prepared.

We also publish information from abroad and we are grateful for it. Dr. Lenka Rudolfová informs us about

the Dutch organization of young practitioners LOVAH. Dr. Lukáš Malý talks about his experiences from Itibo in an impressive article. Very beautiful and interesting reading. I have recently received a book by Dr. Tomáš Šebek Heaven above Yemen. Both the article and the book are based on the similar medical and human philosophies. Mrs. Jolana Boháčková was thinking about a book about drug addiction in Czechoslovakia while raising her several children.

In conclusion, I would like to remind you that in September, the Institute of Physiology will celebrate its 50th anniversary. A brochure was supposed to be published on this occasion, but for the time and financial reasons it will not happen. In its third issue, VNR will publish several articles in which the history of the Ke Karlovu 4 building and its significance for the development of physiological sciences in Czechoslovakia will also be mentioned.

Richard Rokyta,

Chairman of the Editorial Board of Vita Nostra Revue

EDITORIAL



Student Volunteers during a Pandemic

Tomáš Sychra, student of the 6th study year General Medicine 3rd FM CU

Almost every medical student has a desire to help, especially in times of crisis. Questions like "Where do they need help the most now? In what positions can I work as a medic? What about insurance?", are difficult for individuals to solve. That is the reason why the coordination team of volunteers of the 3rd Faculty of Medicine of Charles University worked. It dealt with both the supply of help from students and the demand from hospitals and, of course, all the other necessities involved. Communication with facilities and volunteers took place online by telephone and in person, day and night.

Numbers of student volunteers get involved in pandemic

The original idea was born at the meeting of the Academic Senate of the 3rd FM CU on March 10, 2020, based on suggestions from students. A Facebook group "Volunteers from among the students of FM" was established, currently it has more than 3,400 members, and subsequently a nationwide coordination network with organizational cells was established at every medical faculty in the Czech Republic and also at the Faculty of Pharmacy, Charles University. Each of the groups was

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responsible for a number of medical facilities and provided assistance of their students. In total, over 5,400 volunteers volunteered during the pandemic, almost 3,900 of which were actively assisting at one moment. The whole initiative received support and patronage of Prof. MUDr. Tomaš Zima.

The coordination team of the 3rd Faculty of Medicine managed to create a database of over 900 volunteers, almost 700 of whom actively helped or still help in medical and other facilities. The medical facilities in which the volunteers of the 3rd FM help include the Faculty Hospital Královské Vinohrady, Bulovka Hospital, Thomayer Hospital, Regional Hospital in Liberec, Hořovice Hospital, the Institute for Mother and Child Care, the Institute of Hematology and Blood Transfusion and many others. Step by step the assistance expanded to smaller medical facilities outside Prague which needed help more, students of the 3rd FM were often involved in their places of residence. Not only students of general medicine but also of bachelor's programames helped. All these students were assigned to different places so that the help was as effective as possible.

What were we eligible for?

Students of general medicine and nursing are professionally qualified to work as an ambulance man -nurse after the third, respectively fourth semester and after passing the exam in nursing, patient care or a similar subject, as specified in Act No. 96/2004 Coll. The majority of our students do not have a nursing exam but only a credit, it was necessary for the volunteers to pass the exam additionally through an e-learning course in Moodle. The question is whether senior students should not have other, predetermined competencies but this is not possible with the current legislation.

The assistance provided by the volunteers concerned not only hospitals but also emergency infoline of the State Health Institute, the Medical Rescue Service of the Capital City of Prague, regional hygienic stations









and the national information line of the Ministry of Health 1212. Volunteers also organized babysitting for medical staff of FNKV. In connection with the epidemic, there was also a decrease in the number of people able to donate blood, and therefore students were collectively invited to donate blood at the Central Military Hospital and at the Institute of Hematology and Blood Transfusion. Other activities of our students included sewing face masks and they distributed five thousand pieces. An important activity was also carrying out searches in scientific articles in cooperation with experts from the medical environment, among others, for example with Prof. MUDr. Ladislav Machala in order to inform the lay and professional public about the disease of covid-19. The English curriculum also took part in the assistance and in all the above-mentioned activities.

Raising of awareness

It was not only about specific personnel or material assistance but also about spreading information about how to behave in this unusual situation. An algorithm has been created for the public which clearly summariz-



es how to get involved in helping and who to contact in case of doubt. Another important task of the coordination unit was to fight against the aversion to face masks and the verbal attacks of those who wear them. That is a reason why a Facebook initiative with the slogan # rouškaneníhanba was created. It had to emphasize the need and importance of this protective hygienic measure, especially at the beginning of the pandemic. There was also a video recording where our volunteers help, containing a few encouraging words from well-known medical personalities. At the same time the video had to serve as a motivation for students who have not yet participated in volunteer activities.

It is admirable how many students actively participated in the assistance even though the distance teaching, tests and examinations were in full swing at the 3rd FM. Students often postponed the dates of their exams including the state exams, which they pass now during the vacation. It is great that even those who could not help directly in medical facilities, for various reasons, were involved in.

Countless letters of thanks from the representatives of all the institutions where our students worked, give evidence of excellent students' work. The memorial medal of the 3rd FM was awarded to students by spectabilis Prof. MUDr. Petr Widimský and the Scientific Council of the 3rd FM for their volunteer activities during covid-19. You can get acquainted with a number of stories from the fieldwork in a special part of TRIEDR – the magazine of students of the 3rd FM or visit the exhibition #I help because I can – which is freely accessible in the lobby of the Dean's Office of the 3rd FM throughout the vacations.

I firmly believe that students of all fields of medical faculties will be happy to help in the future as well! However, I hope that a similarly critical situation will not be repeated. Perhaps this wave of the pandemic was a sufficient lesson for the leadership of the Czech Republic and a demonstration of the state of the crisis infrastructure of our healthcare system. We created a questionnaire in which we get an overview of the experiences, opinions and attitudes of students to mapping the situation. We already have almost 400 very interesting answers and more are being added every day.

In conclusion, I would like to thank sincerely all helping students for their commitment, dedication and patience they threw themselves into this unknown situation. I would like also to thank all the teachers for their supportive attitude and I would like to ask them for a sufficient number of holiday dates for tests and examinations so that all students can start the coming

Members of the volunteer coordination team of $3^{\rm rd}\,{\rm FM}\,{\rm CU}$

A. Atakhanova, V. Brnková, O. Cieslar, A. Dvořák, V. Fetissov, K. Grygarová, A. Kantorová, R. Králová, K. Koudelková, V. Matraszek, V. Melenovský, P. Michenka, M. Moudrý, J. Pidhorodecký, S. Skamene, J. Slezák, V. Sobková, T. Sychra, M. Renza, K. Vernerová and many other.

semester without the burden of missing exams. I would like to thank the whole coordination team of volunteers from among the students of the 3rd Faculty of Medicine. Many thanks also to the honorabilis of MUDr. David Marx who extremely helped the whole initiative with his experience and valuable advice.

At www.trimed.cz/chcipomoci you will find all information about volunteering, the number of volunteers in each region, information materials for volunteers, thanks, a link to a special part of TRIEDR, video # I help because I can and much more.



My Life with Viruses

Michal Anděl

When I was a little boy, my parents were afraid that children could get polio. Due to this disease, the children's muscles atrophied in the limbs and some of the children were placed on the artificial lung ventilation – "iron lungs", due to a disorder of the respiratory muscles. The whole world knew the pictures from the Australian sports hall where dozens of children were in iron lungs encircling their chests, only their heads were looking out. I was scared a little about that, too. When the vaccine appeared, Czechoslovakia was the first country in the world to introduce a widespread vaccination of children in 1960 and everyone relaxed.

When my mother was born, the Spanish flu was gone. It had killed about 40 million people. When my mother was a little girl, the parents were afraid that the children might have diabetes, in terms of today's classification the type 1 diabetes. Thanks to insulin, the disease has become well treatable since the early 1920s. It was later shown that a possible trigger of autoimmune β -cell inflammation of pancreatic islet β-cells may be an infection, such as the Coxsackie virus. When I was one year old in 1947, the Zika virus was described in monkeys in Entebbe, Uganda. Seven years later, the first case of an infection of a human was described. In the 1970s, the infection occurred in Micronesia and in 2015 in a number of Latin American countries. The virus is especially dangerous for pregnant women as a microcephaly often occurred in their children.

During the vacation between my third and fourth grade, I got measles. Then my brother caught it as well. Fortunately, without any complications. At that time, some children were dying of its complications.

When I was twelve, there was the Asian flu. Worldwide, more than a million people died.

At the age of twenty, I got chickenpox. It had a very difficult course and I had to spend three weeks in Bulovka Hospital.

When I was twenty-two, there was an epidemic of the Hong Kong flu. It returned a year later and again after four years. Another million people died worldwide, including one hundred thousand in the United States. Nevertheless, we remember that year as a year of the Prague Spring, the Soviet invasion, the flower children or the murder of Robert Kennedy.

In 1970, when I was twenty-four, my knowledge of tick-borne encephalitis was insufficient in my pathology exam. I had to retake the exam and passed it for the second time.

When I was twenty-six, I treated as a graduate military doctor about three hundred soldiers were infected with the flu during Christmas. Maybe it was called the London type of the flu. Afterwards, I was admitted to Military Hospital with pneumonia in January 1973.

In the 1970s, some of my colleagues became infected with hepatitis B. Hepatitis B has been routinely vaccinated for about 30 years. In the 1980s, when I was between thirty-four and forty-four, everyone was afraid of HIV. Thanks to the medication discovered by Professor Holý, AIDS is now a disease that does not have to shorten human life.

In the mid of 1980s when I was almost forty, I treated Professor Karel Raška at the intensive care unit. He had a weak heart after a Q fever if I remember correctly. Before that, he had made a significant contribution to the worldwide eradication of smallpox. When he returned to Prague from the WHO in the early 1970s, he was fired from his leading position at the institute he headed, and completely banned from entering the State Institute of Public Health.

In November 2002, a coronavirus infection causing SARS, a severe acute respiratory syndrome, spread from China. The epidemic lasted until mid-2003. In 2012, another coronavirus epidemic was ongoing, this time MERS, Middle East Respiratory Syndrome. Both diseases had a high mortality rate averaging of 10 % and 39 %, respectively.

When I was fifty-nine, ducks and swans died of the bird flu. There were fears that it would spread to humans.

In my sixties, in 2009, there was the Mexican flu, also called the pig flu. In the Czech Republic, 2.477 people became infected and 102 of them died. The Mexican government protested against both names.

When I was seventy, the Ebola epidemic ended after three years, an infection with a very high mortality rate. In 2015, Bill Gates said that some of the future epidemics posed a greater danger to the nations of the world than a devastating war, and asked for investments to be shifted from weapons into fighting epidemics. New cases of Ebola emerged in the Democratic Republic of Congo this year. Last year when I was seventy-three, a 22-year-old cousin of my student and colleague died of the flu. Due to the flu, a 1-year-old cousin of my colleague was also on artificial lung ventilation and extracorporeal oxygenation for several weeks. She survived. I myself fell ill with a very severe flu B last autumn.

In addition to huge risks, epidemics also have a certain advantage: they draw attention to themselves quickly and dramatically. This leads to rapid mobilization. However, other global problems are reported more slowly and although they may pose a huge risk, they are not perceived so urgently: sea clutter, global warming, even greater water shortages and drought ... We may also be threatened by even more malignant infections. Such risks need much more cooperation and less confrontation. They also need freedom, openness, objectivity, intelligence and solidarity.

Now I'm seventy-four and my kids are afraid I might get COVID-19. One hundred years ago, parents were afraid that their children would become infected, but now the opposite is true. When effective vaccination occurs, will seniors be vaccinated first?

The text was originally written for the magazine Vesmír where it was published on May 4, 2020. Vesmír 99, 251, 2020/5.

COVID-19



Cancellation of the Ball at the 3rd Faculty of Medicine, Charles University – Lessons from Democracy

Jiří Beneš, Department of Infectious Diseases 3rd FM CU and Hospital Na Bulovce

There was an optimistic mood in the Czech Republic at the beginning of March. We knew from the media that there had been a widespread epidemic of coronavirus infection in faraway China for two months and that hundreds of people had already died from the infection. The first worrying news also came from northern Italy where coronavirus infection began to spread in four neighboring regions (Lombardy, Piedmont, Veneto and Emilia Romana). Our government has responded to this situation by activating the authorities of the sanitary service, warning the population against traveling to the affected areas and introducing health checks at the airports for people arriving from these areas. It seemed that the risk of introducing the infection into the Czech

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Republic was very small and that we would be able to detect and isolate all possible cases of import in time, so that the Czech population would not be endangered by this disease.

At this time the preparation of the ball organized by the Trimed student association under the auspices of the Dean culminated at our faculty. The date of the ball was on Friday, March 6, 2020; a traditionally rich program whose compilation and training occupied the organizers for the previous few months had been prepared for it.

On Sunday, March 1, a report was broadcast in TV news stating that the first case of covid-19 had been confirmed in the Czech Republic. The Dean of the 3rd Faculty of Medicine therefore convened a meeting of the crisis team on Tuesday, March 3. Several preventive measures were agreed at this meeting: an apology for absences from attending classes for students who were quarantined upon arrival from abroad; cancellation of teaching organized within the University of the Third Age and the Children's University; strengthening of cleaning and hygienic services in the premises of the faculty, etc. There was also a vote whether the ball should take place and it was decided by a majority of votes that it should.

Meanwhile, information appeared in the media about several other cases of infection being brought from abroad. All patients with a proven disease were immediately isolated at the infection departments in Prague at Bulovka Hospital and at the Masaryk Hospital in Ústí nad Labem. This seemingly confirmed the good preparedness of the Czech Republic but for experts there was an alarming mention of the clinical course of the disease by these patients. Their reported

symptoms were very mild (runny nose, slightly elevated temperature) and did not correspond at all to the description of covid-19 which was reported from China and Italy and which was used to search for people suspected of infection (fever above 38 ° C, cough, shortness of breath). This fact called into question the whole system of surveillance of coronavirus infections on which our hygiene service relied. At the same time there were reports of a growing number of victims of the epidemic in Italy and the collapse of the health system in the most affected regions. The WHO had recommended to extend the risk zone from the original four regions to the whole area of Italy. This raised concerns that tens of thousands of Czechs who went skiing in the Italian Alps in February could become a source of infection when they returned.

The Dean of the 3rd Faculty of Medicine therefore called the crisis team again on Thursday, March 5, the main topic was to make the decision about tomorrow's ball. The meeting took place in an emotionally tense atmosphere with a sense of responsibility. Each participant in the discussion communicated to others the opinion and at the same times the arguments on which he was based. It turned out, based on recent events, five out of ten members of the crisis team had changed their current conviction. A subsequent vote which was attended by three student representatives decided to cancel the ball. The main reason for cancelling the ball was the effort to prevent the explosive spread of the infection among students and faculty staff. There was a danger that they could also become infected by patients in the hospitals where the teaching took place.

The next afternoon the dean convened a meeting of the entire academic community. The members of the crisis

team spoke one by one, in front of about a hundred students and academics, explaining how they voted and why. Then they answered various questions from the plenary. The whole discussion was open, friendly and matter-of-fact. A video of the whole meeting was also taken. The students accepted the decision to cancel the ball without grumbling, although it was clear that they were preparing for this opportunity and looking forward to it and the news of the cancellation of the event really affected them.

However there were economic consequences in the form of financial losses for contractually confirmed rentals of halls and common rooms and for ordered refreshments. Therefore the heads of clinics, most academics and a significant number of students did not demand a refund of the entrance fee which alleviated the economic loss.

Further development proved the considerations of our crisis team truth: On the day of the canceled ball, the first patient appeared, it was not possible to prove contact with an infected person or a stay abroad. This confirmed the suspicion that the infection had already spiraled out of control and was spreading in the population. On 10 March, a government regulation banned mass events for more than 100 people and canceled all school teaching, including teaching at universities. Two days later a state of emergency was declared for the whole republic.

What else to say? I am proud of our students who showed discipline and a sense of rationality, but also proved their capacity for action because they immediately began to organize various forms of volunteer assistance to Prague hospitals and the entire health care system. Hundreds of students from our faculty took part in the medical aid events in a short time. To the least extent, I also appreciate the management of our faculty which showed their foresight and determination. The ball of the 3rd Faculty of Medicine of Charles University was the first canceled mass event in the Czech Republic and the faculty overtook the official ban on such events by five days.

Most of all I was pleased with the consistent application of democratic principles in these tense times. Each member of the crisis team felt a strong sense of responsibility. No one tried to use the situation to their advantage. Neither the dean nor anyone else put pressure on others. People followed their consciences. I had the feeling that the whole faculty at that time operated according to the principles of "res publica" where the first priority is the effort for the successful development of its own community. A similar feeling remained in my memory of November 1989. I am grateful to have been able to relive such moments after thirty years.

My Pandemic Spring 2020

Jana Šeblová

Covid is approaching, it hasn't reached us yet – people are just starting to shop hectically. Long-lasting foods as recommended. It is epidemiologically logical that the virus will visit us as well, even if a person, in spite of himself, wishes it to avoid us. But pasta and spaghetti will probably not help us with immunity...

The first three cases – and paradoxical great relief – it is (finally) here! We don't have to wait anymore, we can do SOMETHING! But lifelong automatic reactions based on the principle of emergency medicine suddenly do not apply here. This "ACTION" will not last an hour, a shift or a week and again the dispute of racio with wishful but irrational thinking and habits.

The face masks are not available. The traffickers have a harvest; they sell a respirator for up to five thousand.

Volunteers start to be active. Suddenly, there are a lot of incredible willing people who otherwise live their decent lives without the light of the cameras – they can't be seen in a non-pandemic world.

The first instructions come from the work by e-mail. Restriction of contacts in the shift, restriction of movement at the station between departures, taking turns for food, take up work all at six. No days off, always on the phone, allow shift shifts. Report any cold to the employer; finish the shift, from the next day to quarantine

Boris Johnson is pretending to be Winston Churchill behind the canal and wants to enter the river of British determination for the second time at the cost of (any) losses: "Prepare to lose some of your loved ones before their time." But he told the nation that he was that he is sending the old and the sick person to hell and that he is sacrificing them on the altar of what? – his self-centered? There is no war, it is the 21st century and ethics dictates to take care about vulnerable groups of people. When Trump hears about the British strategy he puts Britain on the same blacklist as the rest of Europe, a friend – non friend.

The government is announcing drastic arrangements. We older ones remain calm – it has looked very similar in our country for 40 years. Closed borders, empty shops and régime the DIY mode, today's managerial language DO-IT-YOURSELF.

Only grocery stores, pharmacies, gas stations and pet shops are open. I have canned cat food for three weeks in my empty fridge because in our family it has always been and still is "Animals first!" I bring home a third turtle because the pet stores are open.

Praguers put on their muzzles, so far voluntarily. The motto is "My face mask protects you, your face mask protects me."

Praguers reproach individuals for not having a muzzle. The whole republic is putting on muzzles. I have no idea if they are reproaching in the countryside.

I find that lipstick under a face mask is nonsense. Even my other identification feature, earrings five centimeters or more in length, take for granted. The coronary virus has just stolen the external signs of my identity. People suddenly love us. We are amazing doctors and amazing nurses and amazing rescuers, and amazing everyone... hero wherever you look. We look at it slightly in disbelief like a dog from a shelter during first days in a new home. This means that drunken patients won't shout at us that "they're paying taxes"?

The ministry declares that quarantine does not apply to health professionals. We feel a bit like consumer material.

It tightens. The first patients

How did they teach us that time before the state exam in hygiene and epidemiology – the forbidden crossing of clean and unclean operations? How on earth should I divide myself into a clean and an unclean part when I have a patient in a clean and whose heart rate is constantly and permanently 180 and on adenosine his myocardium at all does not respond at all, and in the infectious part there are three patients waiting for me to make a verdict whether they go home or not. But as soon as I get dressed in those decent carnival masks, I just can't get out of them...

The first people died. Even one of ours who was between 50 and 60 and sinned only with being overweight and one pill for pressure. ECMO came late.

Covid is starting to scare me in dreams. So far, harmless. Usually I don't wear all my Personal Protective Equipment (PPE) and I run somewhere without goggles or a protective coat while everyone around is dressed perfectly fine, and I have a feeling of professional failure. I am not frightened by the dilemmas of caring for patients so far – and I hope that will remain so until the end of the pandemic. Sophie's Choice at urgent admission is my nightmare. Because colleagues in Italy, Spain, Sweden and elsewhere are already experiencing them.

"Mom, won't you be afraid if I go to the hospital to help as a volunteer?" My younger daughter writes to me from New York. I will but I also didn't ask the children if I could go to work where I ended up in the Intensive Care Unit twice instead of at home...

Boris Johnson ends up in the hospital and then in the ICU. The mills of God grind surprisingly fast.

We try to get oriented ourselves in the situation and we hunt for professional information where possible. I spend 14 days between shifts with editing and writing pandemic recommendation. Quarantine instructions against boredom are starting to irritate me a lot.

We start to get oriented ourselves a bit. The hospital as well. The current is divided into infectious and non--infectious patients, teams are divided, sampling tents are replaced by cells extended in front of the front door and medics with thermometers are the guardians of all hospital gates.

We are beginning to learn the routine in covid mode. I already know how to deal with PPE! And I can handle it quite quickly.

I am taking a patient with suspected craniotrauma. TEMPERATURE detected at the entrance to the hospital! Hard nut to crack – I refuse to take him away for an infection part without CT and I insist on it. Together with a neurologist and a surgeon we win in the end. Bloody contusion.... When I take an intubated patient for neurosurgery, I wonder how he would end up with a less stubborn crew. And this is the "covid era" too.

People are starting to have enough of the barracks regime, I understand them. Anyone who does not work in healthcare and has not seen the lungs of a patient with covid-19 feels that nothing is happening. That only the old and the sick die and there are few of them. Really?

Say it one more time and for the "old and sick", for that low serial anonymous number put your colleague next door from the office which is not so good for the body and sports. Or a neighbour who retired last year but in order not to get bored at home and also to earn a crown for that dizzying pension she goes to the hospital to clean up. Even so, the "sick dead" look like. In countries where was an exponential increase in the number of infected, they have tens of thousands deaths and casualties among health professionals. And those health professionals do not have time to help people because there are more of them on overcrowded ambulance than can be done by human forces. But that's a long way off, isn't it? Just a few hours by car.

The people began to disintegrate spontaneously. During my emergency service 1/3 of my patients were drunk again. The winner of the day has four per mille and his behavior towards us is so accommodating that in the end we call the police by a panic button. I'm glad that everything is returning to normal.

The government is beginning to disintegrate. Me too, taking earrings to work. Perhaps the rubber bands of Chinese respirators whose quality decrease exponentially with the time since the beginning of the pandemic will survive at the end of the shift I have ears like Spejbl and Hurvínek. But with earrings.

The people disintegrated almost completely, as evidenced by the headlines in the press: The fight in the garden ended in injuries (did they have a face mask when they did not consume?) – Night attack with serious injuries – a helicopter flew for the injured.... We are no longer a national treasure, but we are not yet in the regime of hops for those who pay taxes! Current wording: "We applauded you, what would you like?"

The current rhetoric of social (and other) networks is: a man with a face mask = a dull unthinking creature, a relic of the totalitarian era. Don't we just confuse medicine and politics? And don't we generalize a little across the line?

The holidays are coming. Everyone, except for the people of Prague (and they do belong to it) and the inhabitants of the Moravian-Silesian Region, throw away the face masks and leave for Croatia. Praise the summer! Most numbers and curves begin to rise again.

But still it was nice, that short time of emergency wasn't it? One day we will tell children and grandchildren a bedtime story:

Once upon a time an evil virus appeared with a crown around his head, it came and tried to get into people's cells. Some people fell ill and some even died. But others - and it was happening all over the world - began to think of each other, were considerate and helped each other and had time for their children and improved their homes and gardens. Cars didn't drive and airplanes didn't fly, the air was breathable and animals set out curiously to explore the strange, quiet areas. Charles Bridge and Kampa, on the other hand, had the magical atmosphere as in ancient legends. People suddenly respected health services and sang and applauded them on the balconies every night. Politicians said how they understood that doctors and nurses, and everyone who worked honestly, had to be paid. And then the bell rang and the fairy tales were over and you go to bed, honey...

And what happened to the evil virus? What, it stayed with us forever.

COVID-19

About Homelessness and Covid-19 and the Impact of (no) Housing on Health

Václav Melenovský, graduate in general medicine, 3rd FM CU

Since the beginning of our acting in the project Medical Students on the Street, we have built on the regularity of our treatments and on dates that we have never interrupted, regardless of bad weather or exam periods. However, on the day of the cancellation of full-time education, we are forced to withdraw our treatment of homeless people until sufficient protective equipment is obtained. There are days to weeks when we try to look with everyone else in a new situation, in new measures, recommendations and knowledge about a new disease.

With the arrival of the first protective aids, we are resuming the activities of the first outdoor aid station, introducing the position of a triathlete who asks all visitors about their symptoms and measures their temperature. The City of Prague and charities will also react soon - in line with the recommendations of international organizations dedicated to homelessness, rumors of setting up humanitarian camps are coming and entire hostels for the most sick and oldest (the most vulnerable) people living in the streets. We are immediately invited to cooperate in camps and hostels and we soon start treatment to the extent that we never dreamed of before. In several hour shifts, several times a week in two teams we go around the individual accommodation facilities in which we treat low-threshold in the city center. From the beginning, however, we are worried about our clients - a large part of them are polymorbid, suffer from long-term malnutrition and explaining to them the concept of social distancing, is a real nut. Homeless people, although often seen in public spaces and in places with a high concentration of people, usually live in substantial social isolation (and deprivation) and often meet only a few other friends from the street or low--threshold service providers. Our fear that as soon as the disease spread among the people in the street and it began to spread rapidly, did not materialize we have heard only about few cases among our clients. The situation is completely different for example in large cities in the USA where homeless people are the most affected population, mainly due to insufficient testing capacity, late implementation of comprehensive measures but also the overall setting of the health system that does not allow a more agile response.

The courageous steps taken by the municipality and charities which have secured a roof over the heads of several hundred elderly and sick homeless people have certainly borne fruit.

We have known Mr. Švejnar (name changed) for several years. He is a man of about seventy whom we met during treatment in the social prevention office in Prague 1 within our perhaps most low-threshold aid station. For me, Mr. Švejnar was literally a picture of where one can hit rock bottom. With his three plastic bags he sat with his head down in a chair in unwashed clothes,

full of body lice, often to an extent I had never seen before. He suffered several heart attacks and often had syncope for which he was repeatedly hospitalized. During the last winter he spent several weeks in the ICU due to hypothermia. For the social workers we work with, he was a well known companion and also a tough nut to crack. The efforts to get an apartment ended with Mr. Švejnar leaving the apartment after a short time and returning to his "natural environment" - to the street. We were afraid he would not survive the winter. That is why we were all very pleased when Mr. Švejnar peeked out behind the door in the hotel room during one of our "covid" treatment shifts. To our great surprise, he looked much better - washed and in clean clothes, in a room with a bed made and with several newspapers and a few books lined up on a table. Even communication with him was no longer limited to his thoughtless approval of all our recommendations. He told us about the record store in Nerudova Street which he and his friend opened, he said he still went there to look at the shop window and asked us which records we would like to get. During his stay he visited his outpatient doctors who adjusted his medication so that he would no longer suffer from repeated syncope. The town hall of his part of the city is looking for housing, he is now waiting for a roof above his head. How much health care costs in the form of intensive care in the ICU and several emergency service trips can be saved by having a roof above your head?

The fact that homeless people are significantly more ill than the resident population and that adequate social and primary health care can save the public health system considerable expenditure makes great sense, this is nothing new. This is evidenced by countless numbers of articles in foreign professional journals. For example, The Lancet states that people living in socially excluded populations (homeless people, sex workers, prisoners and drug users) have mortality rates about eight times higher for men and twelve times higher for women than the average population. According to studies from the USA, homeless people have longer and more frequent hospitalizations, use more often emergency care and their healthcare expenditures significantly exceed national averages.

In the Czech context, we still lack of evidence-based data in the field of health care for the homeless and therefore we can only hope that similar studies will be carried out soon in our country and become a suitable tool for other decisions not only medical but also political ones.

COVID-19



Coronavirus Epidemic and Mental Health

Jolana Boháčková

The scientists from the National Institute of Mental Health have been examining the impact of various government measures since the beginning of the covid-19 epidemic as well as the media portrayal of the situation on the mental well-being of the Czech population. They also participated in a large international study.

Anxiety disorders, depression, suicidal thoughts and discrimination

The study "*Me and covid-19* "aimed to map the current mental health of Czechs during the coronavirus pandemic, to find out if they are afraid of infection, whether they encountered any form of discrimination during this period, how to assess the effectiveness of measures taken and the like.

The group led by Dr. Michal Pitoňák from the National Institute of Mental Health in cooperation with the scientific-popularization association Queer Geography collected data in the form of an online questionnaire from 3 to 14 April 2020. The resulting sample contained 2.454 respondents of which 1.285 were women (52 %), 1,112 men (45 %) and 57 (2 %) persons who identified as trans men (24), trans women (3) or non-binary, genderqueer or gender-fluid persons (18). Respondents within the sample relatively well represented individual regions, the least respondents were from the Karlovy Vary region (83) and the most from the South Moravian (219), Moravian-Silesian (219) and Prague (552) regions.

"In our study, we focused on assessing the state of mental health, especially on the presence of depressive or anxiety problems. Our results showed that 42 % of women and 57 % of men had no mental problems and their condition was normal. The mild mental problems indicated results by 35 % of women and 28 % of men. The moderate and very severe mental problems occurred by 23 % of women and 15 % of men.

Of these the results of 14 % of women and 10 % of men indicate the presence of anxiety problems and the results of 15 % of women and 8 % of men for the presence of depression, both types of problems often overlap. A total of 17 % (428) of respondents admitted to having had suicidal thoughts in the last month. Almost double numbers of men (13 %) were at high risk of suicide as women (7 %)," explains Dr. Pitoňák. Higher suicidal ideation is more common in nonheterosexual people.

Out of the total number of 2.454 respondents, 269 persons (11 %) encountered some form of discrimination or other type of inappropriate behavior due to covid-19. The most common were excessive vigilance and reporting by the neighbour (19 %), hostility towards certain groups (cottagers, commuters, Prague's – 17 %). Other forms of discrimination include, for example, hatred on social networks and 3 % reported even serious cases of reduced access to healthcare or refusal of care.

Resistance to microbes and increased hygiene

For the perceived vulnerability to infection we measured a general value that exceeded the usual values only slightly but for the second indicator – resistance to microbes – we recorded significantly increased values for both men and women. Unsurprisingly we can find that the fear of infection and resistance to microorganisms is currently significantly higher in society than usual, "describes Dr. Pitoňák. Not surprisingly 96 % of respondents adhere to the mandatory wearing of face mask. More interesting was the finding that more frequent hand washing or use of disinfectant was admitted by only 73 % of respondents.

Another of the questions concerned how respondents assessed the measures. "The greatest agreement on effectiveness was in the isolation of those infected in the domestic quarantine (66 % rated this measure as fully effective) and the avoidance of contact with those most at risk (58 % rated this measure as fully effective) and social distance (52 % rated this measure as fully effective). On the other hand the restrictions about doctor visits were identified as the least effective forms of measures (25 % described it as fully effective) and only 19 % described wearing face masks as fully effective. Our results show that most people (65 %) agree that wearing face masks should be mandatory for all in places where this is justified but that it should be voluntary in other places (eg. parks or nature where we are not closer to the other than 2.5 meters), concludes Dr. Pitoňák.

The Czechs participated in a large international study

The National Institute of Mental Health under the leadership of Dr. Denisa Manková also participated in an extensive international study on covid-19 and (not only) mental health. It should reach a total of 100,000 participants from 110 countries on six continents. The aim is to evaluate among the general population, but also health professionals, how their physical and mental well-being has been affected since the outbreak of the covid-19 pandemic. The project "The Collaborative Outcomes Study on Health and Functioning during the Infection Times (COH-FIT)", involves almost 200 researchers and has been approved by several national and international professional organizations.

"We are interested in demographic data, information about the profession (health care / police / firefighters / military workers vs. others), physical and mental health and behavior, environmental factors, both before and during the covid-19 pandemic and after. The aim of the study is to identify who is at higher or lower risk of developing physical or mental health problems during a pandemic and during various degrees of restriction, "explains Dr. Manková. Another goal is to identify risk and protective factors that will provide information to prevention and intervention programs focused on the covid-19 pandemic and other pandemics in the future. Thanks to the acquired knowledge the more effective protection of risk groups could be ensured.

The research will take place in three stages: the first has already started, the next is planned in a few months

and the last will take place a year after the end of the pandemic. "This is a voluntary, free and anonymous survey conducted on the website https://www.coh-fit. com. The survey is divided into three areas according to the age of the respondents – adults, adolescents and children aged 6 to 13. Minors participants need the consent of a legal representative, the questionnaire is fully in Czech, "adds Dr. Manková. Tens of thousands of respondents from all over the world have already filled in the questionnaire. The first results can be expected in a quarter of a year.

Method of monitoring media affects mental health

According to another NÚDZ study, mental health during an epidemic is also affected by voting preferences, the type of media that people watch or whether they read only headlines or go deeper. Already during the peak of the pandemic researchers from NUDZ conducted several internet surveys which brought the first results. Among other things, they dealt with the role of the media which people drew information about the current situation from. They divided the media into several categories according to the degree of credibility of the provided news, public service media (ČT, ČRo, ČTK) to disinformation media.

They also found how often the respondents watched these types of media. "The first of the online surveys was attended by over 1.5 thousand respondents who answered a number of questions, including mental health and the use of various media. As expected, they confirmed that concerns about infection, economic and other negative effects of covid-19 increased anxiety and depression during the epidemic. We also found that more regular monitoring of public service media improved the overall mental state, while increased confidence in the news more oriented to dramatic submissions increased anxiety," describes the Deputy Minister for Science and Research NÚDZ Prof. Jiří Horáček.

The negative impact on mental health was more pronounced for people who limit themselves to quickly learning about what is happening by reading headlines than for those who read articles in their entirety or find more details and information. "This remarkable finding would offer a relatively easy way to prevent the effects of similar events on well-being. All you have to do is read the whole news articles, think about them and not limit yourself to a quick flick through the headlines. The headlines are more likely to attract our attention, so they are often exaggerated, simplistic and cause fear and anxiety," adds Professor Horáček.

Researchers also found that voters from different political parties responded differently to the epidemic. Dr. Veronika Fajmonová, a member of the research team specializing in political psychology, sums up: "People who would elect government parties (ANO, ČSSD) or the KSČM which supports the current government had a slightly smaller impact on mental health than mainstream opposition voters. This is not entirely surprising. "It is probable that the voters of government parties believed more in the government's measures and the epidemic had less impact on their mental well-being," adds Prof. Horáček.

The extent to which a person is able to tolerate uncertainty has also significantly effected the impact of a pandemic on mental health. "The ability to manage uncertainty is a personality trait that differentiates different people from each other. The last decade has brought a number of problems that are associated with uncertainty: climate change from global warming, through the refugee crisis to the covid-19 pandemic. Our results confirm that increasing the ability to tolerate uncertainty which is dealt with by a number of psychotherapeutic methods, can be an important factor in how to prevent the effects of these problems on mental health, "adds doc. Ladislav Kesner, research team leader.

At the National Institute of Mental Health, they are now preparing a population-wide survey to confirm or disseminate these preliminary results. With regard to possible further waves of the epidemic the main goal of the NÚDZ team is to set specific recommendations for the prevention of the effects of covid-19 and similar problems on mental health.



Covid-19 and Emergency Medicine

Jana Šeblová

The first thing that had to be understood at the very beginning of the pandemic was the simple fact that, regardless of the specialization, managing of a new disease applies to all fields. It was not a problem of infectious medicine, hygienists, intensivists, internists, urgentists, cardiologists, radiologists, palliative medicine doctors, microbiologists or virologists – it was a problem for all of us. We all had to learn from each other and we had to work very closely together, and really, not just on paper. For this reason, many recommended procedures emerged on the interdisciplinary base or been widely shared.

After the initial lack of information (meaning professional, not news in the general media), their abundance appeared and it was necessary to accept articles with an appropriate degree of critical insight, i.e. at least a thorough look at the methodology and statistical processing and sources.

I would like to summarize briefly what was either specific for the field of emergency medicine or which "know-how" from another specialization helped us.

Risk assessment and protection of health service officers and patients

The safety of health service officers has become one of the priorities, both for the protection of their health, for the sustainability of the entire health care system and, last but not least, for reducing the risk of the spread of the disease among patients by a sick asymptomatic health service officer. All aspects of safety included regime measures (dividing of teams, uniform start of shifts, minimization of movement at workplaces, division into "infectious" and "non-infectious" parts of emergency income and of course disinfection according to all current recommendations. However, the key measure was to determine the level of risk in each specific case and to define the minimum requirements for personal protective equipment (PPE).

In the conditions of emergency medicine, the determination of the possible risk of transmission of covid-19 (i.e. modified sorting – triage) was at three levels:

- the dispatcher of the operating center evaluated the epidemiological criteria (ordered quarantine, positive tests for the presence of the virus, contact with covid-19 positive person) and clinical criteria (signs of respiratory infection, temperature above 37.5 °C, cough, olfactory loss and taste, gastrointestinal symptoms). It was not possible to obtain these data for some way out (unconscious patient, circulatory arrest, serious injury, etc.).
- The second level of evaluation was screening by members of the emergency medical service (EMS). Based on a more detailed anamnesis, clinical examination and evaluation of monitored parameters, they specified the epidemiological condition of the patient.
- The third level of sorting was **the entrance to the hospital**, both for patients brought in by emergency medical service and for those who came directly. If the hospital had an urgent admission, it was

necessary to divide it (including staff) into infectious and non-infectious routes.

It was a matter of course to pass on information on the epidemiological evaluation of the patient's condition in the entire chain of care: from the operating center EMS and then after specifying to the hospital's place of admission.

This classification resulted in three groups of patients: the first group-patients with covid-19 and positive patients, the second group-patients with minimal risk (no clinical signs and no epidemiological history), and the third group being indeterminate. These patients were automatically considered (even with regard to the severity of their condition and the assumption of the implementation of risky procedures and interventions) as potentially positive.

The use of PPE has been based on the determination of infection risk. An FFP respirator (or N95) for a 12hour shift, goggles and gloves were recommended for the treatment of low-risk patients. For patients at higher risk a shield and a protective empire were added and for the same category of patients and at the same time with the assumption of so-called aerosol-generating procedures instead of an empire, a waterproof coat, cap and gloves (preferably two pairs). After contact with the patient at risk all used PPE were disposed of as infectious waste immediately after the end of treatment.

All patients should have a surgical mouth-screen throughout their treatment if their medical condition allowed it.

Transport or don't transport?

For patients who were treated by the emergency medical staff on the spot, it was necessary to make

decision on transport to a medical facility. Patients with a respiratory infection did not necessarily need to be transported for examination, as this would increase the risk for them as well as for other patients and healthcare professionals. However, safe retention criteria had to be established. This would be important especially in the situation if the capacity of hospitals approached or even exceeded its limit (the favorable epidemiological development was not clear at all in mid-March).

The indication criteria for transport to the hospital were set as follows:

- age 60+
- severe cardiopulmonary morbidity, diabetes mellitus, obesity, other serious diseases including immune disorders, etc.
- hemoglobin oxygen saturation below 93%
- resting respiratory rate $\geq 22 / \min$.
- resting heart rate >110 / min.
- impaired consciousness (attenuation, disorientation).

The leader of the rescue squad (doctor or paramedic) could decide individually after evaluating all factors (clinical condition, course, risk factors, prognosis), however, unification of criteria could become a guide and support especially for non-medical crews which are often sent to lower priority trips.

If the crew left the patient in ambulatory care, the team leader had to instruct the patient and household members about the need to monitor health and to be in at least daily telephone contact with their attending physician (this often accounted for two-phase covid-19 insufficiency if the condition worsened).The patient and all members of the household were also familiar with the principles of personal hygiene, anti-epidemic measures, health monitoring, what symptoms should be considered serious and when call 155 immediately.

However, the health care system also had to deal with common diseases unrelated to the pandemic, or diseases or injuries in patients with co-infection of covid-19 and, of course, serious conditions with centered care (acute coronary syndromes, strokes, serious injuries, burns, etc.).The center patients had to be referred to adequate care according to the applicable criteria. The care of patients at risk of life must not be fundamentally affected by anti-epidemic measures, and it was up to individual hospitals to ensure both the operation and information of the emergency medical services (EMS) about the point of entry (it could sometimes be different than usual).

Almost in all countries was a temporary decline in patients in the emergency care, both in the field (EMS) and in emergency admissions. Part of this decline was in lower priority conditions, patients were afraid to go to crowded outpatient department and their health problems were solved by telephone consultation with the attending physician, but some countries also reported a decrease in acute vascular events or acute coronary syndromes. A more accurate evaluation will be possible only with a longer time interval when we will have summary epidemiological data of these non-infectious serious diseases. In the first weeks of the pandemic, there was a slight decrease in injuries to reduce risky activities due to quarantine, but this trend did not last long.

Urgent admission

All hospitals had to resolve the separation of the admission of patients with suspected or confirmed disease

of covid-19 from patients where the risk was low and who were being treated for another clinical problem. It was also necessary to divide the nursing staff and, if possible, to have backup teams in case of quarantine of more staff. All sections of the emergency admission had to be doubled - in terms of space, material and personnel. This often required change in routine procedures. This was a relatively organizationally demanding task to organize not only for the management of hospitals but also for the healthcare professionals, it was necessary to make this division as quickly as possible in order to make sense. Ideally, the "infectious" sorting of patients took place before entering the medical facility, a large number of hospitals (also abroad) used container cells where the basic treatment was possible. This proved especially when a patient with a respiratory infection was treated on an outpatient basis (the same criteria as for patients not transported by EMS).

Classification of patients in terms of possible infection risk did not replace the usual classification on emergency admission, so setting priorities for treatment. In both streams, the urgent care (patients – priority 1) had to be provided without delay. Other patients also had to be treated according to the nature of their problems and urgency in a standard way.

Patients with minimal risk of covid-19 were treated on a regular schedule. Patients with suspected or confirmed of covid-19 infection were treated and, if necessary, hospitalized in an isolation regimen (separate department or isolated isolation rooms) until the infection was confirmed or eliminated. All hospitals had to set aside or set up "covid units" with the possibility of artificial lung ventilation for the eventual admission of patients with respiratory failure. As a result, the capacity of intensive care was increased and thus the reserves for possible exponential growth of infected patients with a serious course.

Intervations and techniques in urgent care and cardiopulmonary resuscitation

The risk interventions included procedures associated with the formation of a potentially infectious aerosol (so-called aerosol generating procedures):

- techniques of securing the air passages (tracheal intubation, introduction of supraglottic aids, coniotomy, but also ventilation with a self-expanding bag with a face mask or suction from the air passages);
- cardiopulmonary resuscitation;
- chest decompression (puncture, chest drainage or thoracotomy);
- introduction of a nasogastric tube;
- nebulisation treatment.

As the nebulization treatment is the standard treatment for both asthma attacks and exacerbations of chronic obstructive pulmonary disease, it was recommended to use a surgical mouthpiece through a nebulization mask in the "covid" period. The helmet systems were recommended for the non-invasive ventilation.

Ensuring of entry into the circulation (peripheral venous cannula or intraosseous entry) and insertion of a permanent urinary catheter, on the other hand, were not among the risky procedures.

To reduce the risk of aerosol formation, some of these procedures were modified (indications remained the same, of course). The technique of breathing with a self-expanding bag while holding the face mask with both hands was recommended and the bag is compressed by another person.

During tracheal intubation, minimize disconnection of circuit, pre-apply antibacterial filter and capnometer, and verify cannula location with capnometer or ultrasound. In the case of artificial lung ventilation try to minimize the need of disconnection the circuit. When performing a coniopuncture, chest drainage, or closing a nasogastric tube, never leave the cannula, tube, or set open freely in the space, so use a closed breathing system, attach a syringe or flap on the drainage set, and a Janett syringe to the NG probe.

These recommendations were logical, but required a change in the stereotypes experienced movement in performing these activities.

During cardiopulmonary resuscitation there was a high risk of aerosol exposure because almost all acts were risky: chest compression, self-expanding bag ventilation, securing of airways both by intubation and supraglottic aids, and airway aspiration. A great emphasis was therefore placed on adequate PPE, although their use could lead to a small delay in the initiation of CPR. Diagnosis of circulatory arrest should be performed only remotely (by sight) or with palpation of the pulse on large arteries. For basic CPR to prefer indirect cardiac massage without breathing to adult patients which also applied to the instructions of the operating center (so-called telephone-assisted emergency resuscitation). When securing the airways - in contrast to current recommendations - interrupt the heart massage for this moment.

The indications and contraindications of CPR have not changed.

Collection ambulances, operating center and other tasks of emergency medicine

At the very beginning of the spread of the infection emergency medical services had to set up so-called sampling teams. One or more ambulances and a corresponding number of drivers (minimum two per car) have been set aside for the provision of PCR tests in patients' households at the option of the hygiene service. Patients, who met the criteria for outpatient care, whether they were treated by the ambulance service or in a hospital, were also tested in this way. The movement of high-risk patients around the medical facility was minimized, it reduced the risk of community spread.

The work of emergency medical service operators is demanding in itself, and in pandemic times these demands have increased even more. In addition to their normal activities, they conducted the first trilogy of epidemiological risk so that the crew had at least the basic information available. Until the establishment of the national information line 1212 they had to handle many inquiries from the public. They had to communicate with the overloaded hygiene service and coordinate the activities of the ambulance service.

It's necessary to mention the members of the SPIS – the System of Psychosocial Intervention Services. Trained peers and crisis interventioners assisted in the volunteer regime, on which the entire activities of the SPIS are based, on the support telephone line of the nationwide call center. They helped anyone who had just been exposed to loneliness during quarantine or fear of the unknown. And they were there not only for the public, but also for paramedics, for whom it was a bit too much at the time.

Vaccine, Cherry Orchard and New Challenges

Michal Anděl

I was pleased but also with mixed feelings, I read yesterday that the staff of the State Health Institute (SZÚ), IKEM and the Institute of Hematology and Blood Transfusion will be preparing the production of a vaccine against the new coronavirus SARS-CoV-2. Where my mixed feelings come from it is easy to explain. Until 1997 the Czech Republic had an institute that developed and produced vaccines and sera. At first it was part of the State Health Institute, it was established as its department which was engaged in the production of vaccines against rabies and smallpox.

In year 1928 the production of an oral live BCG vaccine for vaccinating newborns against tuberculosis began here. Since the beginning of the 1930s the SZÚ has been involved in vaccination against diphtheria which has become from the experimental stage to a method established by the hygienic service. Hundreds of thousands of children were gradually vaccinated, in 1933 it was 80,000, in 1934 more than 150,000, and most of the vaccines were produced by SZÚ with all their might! In the early 1930s the institute produced a vaccine against typhoid fever and also took part in the suppression of the tularemia epidemic from 1937 to 1938.

During the Protectorate of Bohemia and Moravia the production of serums and vaccines continued at the institute under significant German supervision. However, certain autonomy of the institute was preserved: although the production of anti-tetanus serum and anti-diphtheria serum for the needs of the Wehrmacht increased, their production was also preserved for the Czech population.

After the Second World War the research into vaccines against tick-borne encephalitis and poliomyelitis (polio) took place in the renewed SZÚ and then in the Institute of Sera and Vaccines. The legendary employee of this institute, Associate Professor Dimitrij Slonim (1925–2017) was significantly involved in the eradication of polio in our country. The application of the measles vaccine led to the eradication of this disease as early as in year 1982. In addition to the production of vaccines, the institute carried out excellent research.

In addition to the research and field activities of the Institute of Epidemiology and Microbiology attoday's State Health Institute and the activities of Professor Karel Raška at the World Health Organization, Czechoslovakia was one of the world's most respected countries with the most advanced prevention of infectious diseases. Unfortunately, the Institute of Serums and Vaccines did not survive the 1990s. In year 1997 its activity ended. The reason was not only the reckless of privatization process. There was both contempt for the preventive segment of medicine and the foolish belief that some commodities, such as vaccines, can be easily obtained in global trade. Of course, the large corporations can better ensure their testing and safety. However, the question remains whether with a more sensible approach to privatization, the Institute for Serums and Vaccines could not have become such a large global company. Pharmaceutical giants are based not only in the world's largest countries, but also in Switzerland, Denmark and Belgium.

About forty five years ago my tutor in the newly formed IKEM, dr. Vladimír Brodan made an apt comparison which at the time concerned the just-abolished Institute of Nutrition. "Do you know how a cherry orchard is planted in the Czechoslovakia?" I looked at him blankly. "At first you have a flowering cherry orchard that produces great cherries. Then someone comes who decides that a parking lot will be created in its place. The trees are cut down, the roots are uprooted, bulldozers arrive, the cherry is chopped down, and the area is asphalted. Twenty-five years later someone remembers the beautiful big cherries. There will be a long negotiation after which it is decided that the cherries will return to their original place. Asphalt and gravel are removed, soil is brought in and small trees are planted. After ten years, they are already bearing good fruit."

The Czech landscape is dotted with many similar examples. The liquidation of individuals and work teams took place during the Nazi protectorate, continued in the 1950s, as well as during normalization after the Soviet occupation. Unfortunately even in the 1990s some cases of restructuring led to "sthrowing the baby out with the bathwater". Perhaps it is time to remember some of them and try to resurrect them. The restart of the economy after the first wave of the covid-19 epidemic must not be just a restart of existing companies. We must also demonstrate the ability to see new challenges in new problems, although many may have old roots. Although it is clear that the development of a new vaccine is a thorny path, its successful testing is extremely difficult in the conditions of our country and it would be almost impossible to compete, this challenge is appealing at first sight. However, its feasibility must be verified. It would be necessary for people and teams from the institutes of the Academy of Sciences and universities to join this challenge. The international cooperation would be also needed, especially at the level of European Union. It would also be important for success that it is not just a project to prepare one vaccine but a resuscitation of one industry that has a tradition in our country. Only then one can believe that the preparation of the new vaccine will be accompanied not only by the powerful founding spirit that prevailed at the State Health Institute 95 years ago but also by the state support that this segment of economic life needs. It is related to one of the most precious values we have in our society.

Survey: Online Lectures, Remote Testing and a Minimum of Personal Contact

The changes and regulations at the time of the coronavirus pandemic affected mainly the normal operation of hospitals, but to a large extent also university education. Several leaders and academics describe how such a "temporary" operation looked like in practice.

1. What did the "covid" measures mean to you in terms of work?

2. How did the measures affect the teaching of medics? Did it suit you?



Prof. MUDr. Romana Šlamberová, Ph.D., Vice-Dean for Postgraduate Studies and Student Research Activities, Head of the Department of Physiology, 3rd Faculty of Medicine Charles University

1. During the state of emergency, we had fully launched experiments, so despite considerable restrictions and

in compliance with the prescribed measures, we went to our institute in small numbers and we continued in the work. Unfortunately, experimental work cannot be done from home.

In addition to working on our own experiments, we were at the "home-office" and we communicated online, using available means of virtual communication. Everything worked without problems, we managed to maintain work performance and commitment. Unfortunately, what could not be replaced was the social contact, both within our team and with our students. Personally, I believe that all bad things can be good for something, and that this coronavirus crisis has helped to shake up the old structures and launch electronization in some sectors of our society that have been resistent to it for a long time. We hope that this will also apply to the authorities in a greater extent.

2. As part of our teaching (Module Structure and Function) in the second year, we went to online teaching relatively quickly without major complications. As one of the few at the faculty, we used the universitysupported Microsoft Teams system for online lectures and their recording, as well as for seminars and subsequently for distance testing. Some practical exercises were also demonstrated using this software (in the field of practical training, of course, the effects of emergency measures were most noticeable). Foreign students even proactively made their own communication channel for the whole study year and individual study groups. So all communication with us, the teachers, was conducted with foreign students exclusively through Microsoft Teams after experiments with other applications. The Moodle application also proved its worth for students of the Czech curriculum.

My personal experience with lectures held in this virtual way had pros and cons. The software itself was easy to use and worked smoothly. After the first nervousness and unusual feeling to have lectures sitting without eye contact with students, I got used to it. Sometimes I challenged students to a verbal response to make sure someone was on the other side listening. Especially for foreign students, who were in a less number in the study year, at least during the final discussion, we turned on all the cameras so that we could see each other and make closer contact. It was nice to see them sitting relaxed at home and not in the benches in the auditorium. Even so, I must say that I prefer lectures in which I have direct contact with students and I can see their reactions and adapt my speech accordingly.

As for the optional course I lead, we already had all the lessons filmed on camera from previous years, and these recordings were fully available to students. I evaluate very positively that we recorded seminars and practical training in previous years and so we were prepared. The question is how intensively the students used this opportunity. We also offered students the opportunity to discuss the topics from the course with us personally (virtually or physically in small numbers) on pre-determined dates, but the interest was negligible. All students enrolled in our course then fulfilled the set obligation by creating a presentation (poster) on a selected topic and therefore successfully completed the course even under extraordinary measures.



Prof. MUDr. Andrej Sukop, Ph.D. Head of the Department of Plastic Surgery, 3rd Faculty of Medicine Charles University and FHKV

1. Covid's measures completely changed the management and operation of the Department of Plastic Surge-

ry. It was necessary to reduce completely 90 % of the operations, to move all departments and intensive care units of both adults and children to one floor of the clinic in order to minimize the number of employees present. It was necessary to organize all the patients and cancel the elective surgery and after a few weeks the

whole Clinic, which realized over 8,000 procedures a year, restarted again. This process was a huge burden on the entire official apparatus of the clinic. Only acute injury treatment and cancer patients surgery were not reduced during the covid measures.

Overall, the pandemic paradoxically had an extremely positive impact on the entire team, which was able to come together and react immediately to situations that were changing several times a day. As a head, I was proud of all the employees of the clinic, who, thanks to their personal invention and commitment, enabled the clinic to run completely smoothly.

2. Thanks to timely information from the faculty and the incredible commitment of the ICT department, we managed to switch completely to distance learning in a few days. Students had at their disposal both online teaching and all teaching materials available to download. Unfortunately, practical learning, in which students can manually try out individual surgical procedures, can't be replaced by any distance learning. On the other hand, after the pandemic, we allowed all our students from the 3rd Faculty of Medicine Charles University unlimited internships at the outpatient clinics, departments and operating rooms.

Student Research Conference Is Postponed until Autumn

In response to the current epidemiological situation of covid-19, the Student Research Conference has been postponed this autumn. However, on 20 October 2020, it will take place. The conference will traditionally be divided into four categories – theoretical, clinical, bachelor's and postgraduate – and, as in previous years, this year will offer both interesting lectures and engaging posters. The entire postgraduate category will participate in English language.

The news of this year is also the competition "Medicine in 2050" where students can present their vision of the medical world in thirty years. The participants of conference will then evaluate the individual visions and the winner will be awarded with an iPad. This year, for the first time, a web application especially created for our conference will be launched.

There will also be guests of honour at the conference, this year presented by graduates of our faculty. In the morning program, the head of the IKEM Transplant Surgery Department, doc. MUDr. Jiří Froněk, Ph.D., FRCS will represent and after lunch doc. MUDr. Jan Hajer, Ph.D. he will give his lecture on "New directions of therapeutic endoscopy". The director of Charles University Innovations Prague s.r.o. (CUIP) Mgr. Otomar Sláma, MBA, MPA will cause a stir with his lecture "How to rob scientists".

We wish all participants' good luck and all visitors a lot of new knowledge. We believe that the Student Research Conference will build on the success of recent years and we look forward to your visit.

Team of coordinators of the SRC 2020

Associate Professor František Vyhnánek, Prominent Surgeon, Passed Away

Doc. MUDr. František Vyhnánek, CSc., was born on November 27, 1944 in Praze. He has dedicated his entire life to surgery since graduating from medical faculty in 1968. He began his surgical career in 1969 at the department of surgery of the Slaný Hospital. In 1972 he entered the Clinic of Surgery of the Faculty Hospital Královské Vinohrady and became a student of a prominent Czech surgeon – Prof. Polák. In later years, he was a sought-after Vinohrady surgeon not only for his surgical skills but also for his extensive medical knowledge and admirably kind approach to all patients.

Throughout his professional life he introduced new, modern procedures in surgery into his daily practice. He was known for his broad interdisciplinary perspective so he became one of the founders and promoters of perioperative nutrition in surgery and the field of trauma surgery. Within "his hospital and his faculty", he exemplary held the positions of head of the Trauma Center of FHKV, head of the department of surgical fields of the 3rd FM CU and deputy head of the Clinic of Surgery for scientific activities. He has long been a member of committees of many Czech and foreign professional organizations (Czech Surgical Society, Czech Society of Trauma Surgery, Society of Clinical Nutrition and Intensive Metabolic Care and others).



He selflessly passed on his knowledge to students of the 3rd FM, younger colleagues at the clinic and doctors from all over the country as part of specialized in--service training courses. His honest, consistent and professional approach was rewarded with the love of patients and the recognition of the professional world. He has been awarded many awards for his work. One of the most important was the award given by the Rector of Charles University for his life's work – the Memorial Medal of Charles University. Other memorial medals were also awarded to him by the 3rd Faculty of Medicine, the Czech and Slovak Surgical Society, the Czech Society for Trauma Surgery and others.

Associate Professor Vyhnánek organized the traditional Traumatology Days – in 2020 it should have been the 15th year. Thanks to his good international reputation he was even tasked with co-organization of the World Traumatology Congress in Prague.

With death of Associate Professor Vyhnanek, the academic and surgical community loses an important, respected and successful surgeon and a kind and popular colleague. May he rest in peace.

Jiří Roštlapil – 100 years

Pavel Čech, Section of History of Medicine, 3rd FM CU

When Czech universities were shut down by Nazis in 1939, young student of medicine, born on January 10, 1920, made his living as a tractor driver then a clerk of the Privileged Cereal Society and then a clerk of the Ministry of Agriculture until year 1947; after the liberation however in 1945–1949 he studied the reopened and still unified Czech Medical Faculty of Charles University in Prague. After graduation he worked as a secondary physician at the Vinohrady Hospital in Prague, first in the Ungar's department for radiation therapy then in Hodek's outpatient allergology department, before being called for extraordinary service in Czechoslovakia army in 1951; as a head doctor of a military school and at the same time the doctor of the OÚNZ Litoměřice, he gained a broad view of practical medicine.

Syllaba's assistant, gastroenterologist and diabetologist

In 1954 he returned to Vinohrady Hospital at that time the clinical base of one of the three daughter branches of the divided Prague Faculty of Medicine – the branch for which the direction of hygiene was designated and the name Medical Faculty of Hygiene. Dr. Roštlapil joined the internal propaedeutic clinic, renamed on October 15, 1954 to 2nd Internal clinic, under leadership of extraordinary Professor Jiří Syllaba as head of department. He published in the professional literature a case report (The Case of Sublimate Poisoning Rescued by BAL. *Prakt Lek* 1956; 36 (15/16): 379–380). In 1960

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he was named Assistant Professor of 2nd internal clinic when he clearly inclined to gastroenterology; he perfected with observations with Associate Professor Zdeněk Ma-



řatka and he devoted a considerable part of his research in cooperation with the pathologist Miroslava Zrůstová (Liver changes in Kimmelstiel-Wilson syndrome. Cs Gastroent Výž 1962; 16 (2): 100–105, with M. Zrůstová). The liver became the organ of his first choice (Can protracted liver disease be considered as a pre-diabetic condition? Prakt Lek 1963; 43 (21): 810-812), biopsy method (Clinical importance of targeted and untargeted liver biopsy. Cas Lek Cesk 1964; 103 (40 (1102-1106), and the dysentery was his predominant attention (Today's Diabetes Prevention. Acta Univ Carol [Med] Suppl 1964; 10 (19): 87-91, with J. Syllaba, M. Lochař, L. Rosa and E. Wichnerova): a liver biopsy by patients with this disease was described in the article (Liver biopsy in diabetics. Cs Gastroent Výž 1965; 19 (1/2): 25-26, with M. Zrůstová) and part of the candidate work (Price of liver biopsy in liver diseases and dysentery. Prague 1965). He verified clinical knowledge in animal experiments

(Experimentelle Angiopathie und Lebersteatopathie durch langfristige Ketonkörperverabreichung bei Ratten. Acta Diabetol Lat 1966; 3: 194–201, with M. Zrůstová), he lectured on them at diabetic symposia and congresses and wrote habilitation dissertation from lectures. In 1968 he was named and on January 1, 1970 appointed Associate Professor of pathology and therapy of internal diseases; meanwhile, in 1969 he was appointed educational deputy of head of the clinic whom became Associate Professor V. Víšek in 1970.

Associate Professor of Víšek, Chairman of the ČDS

Then he dealt with the effect of sulfonylurea oral antidiabetics 2nd generation of glibenclamide to pancreatic endocrine tissue (Case of observed islet regeneration of Langerhans islets after glibenclamide in a diabetic. *Vnitr Lek* 1971; 17 (12): 1203–1206, with M. Zrůstová) and diabetes in terms of pathological anatomy (Causes of death in autopsy diabetics compared to nondiabetics. Prakt Lek 1972; 52 (20): 759-766, with M. Zrůstová and V. Dvořáková). In 1973 he was elected chairman of the Czech Diabetes Society. With M. Dryakova he focused on glucose tolerance and it's testing (Effect of different glucose load on the oral glucose tolerance test. Prakt Lek 1974; 54 (2): 65-67, with M. Dryakova). When comparing stages of aortic arteriosclerosis, coronary and cerebral blood vessels in a group of 1796 diabetics and an equally large group of non-diabetic patients who died in the years 1957-1971, he found more frequently by diabetic patients coronary arteriosclerosis 3rd degree (Diabetes mellitus und seine Gefässerscheinungen. From Ges Inn Med 1975; 30 (11): 65-68, with M. Zrůstová). On the retina of diabetics he found a higher frequency of morphological vascular and nerve changes than would correspond to the ophthalmoscopic finding (Diabetic retinopathy. A clinical and morphological study. Acta Diabetol Lat 1975; 12 (5-6): 272-288, with M. Zrůstová and F. Vrabec). He published a brief monograph on PAD (Current state of treatment with oral antidiabetics). In: News in Medicine No. 16. Prague 1977, p. 63n, with K. Zelenka). He paid attention to the side effects by biguanides (Biguanides and lactacidosis. Vnitr Lek 1978; 24 (8): 772-777, with K. Zelenka) as well as contraindications (Danger of alcohol use in the treat-ment of biguanides. Vnitr Lek 1979; 25 (4): 374 - 379, with K. Zelenka and M. Křišťan). He found the axonal and myelin changes of the degenerative type in the nerve endings of diabetic muscles of diabetic patients to support the presumption of ophthalmoplegia as the first manifestation in the preclinical phase of diabetes (Diabetic changes of the extra-ocular muscles in man. Acta Diabetol Lat 1979; 16(1): 55-62, with M. Zrůstová and F. Vrabec). Echocardiography of 23 diabetic patients showed significant thickening of the posterior wall of the left ventricle and increased thickness to radius of the ventricle and by diabetic patients with hypertension also marked thickening of the interchamber septum (Heart of diabetic patients in echocardiographic image). Vnitr Lek 1981; 27 (10): 976-980, with P. Gregor, P. Widimský, V. Červenka and V. Víšek). The lecture on March 22, 1982 (Diabetic cardiopathy. From a lecture evening of the Association of Czech Doctors in Prague. Cas Lek Cesk 1982; 121 (26): 831, with M. Zrůstová) became his final performance: 4 weeks later - on April 19, 1982 - this member of the European Diabetes Society, a member of the European Epidemiological Group for the Study of Diabetes, a corresponding member of the Diabetes Section of the Endocrinological Society of the GDR and a member of the Federation of International Danube Symposiums on Dysentery in the course of preparations for the Danube Symposium he died shortly before achieving his doctorate of medical sciences in Prague 1982.





Stories from Itibo

Lukáš Malý

I have learned from Hemingway that the less you say, the more you communicate. We know that he wrote three times as much as he published. That's what it's about. There is a secret in the nature of writing. If you really know it, it's there, and you don't have to repeat it. You don't have to complain that you can just say it with a hint ...

(Arnošt Lustig, Interview, selected interviews 1979-2000)

Sometimes I get the impression that what we are going through in Itibo, with students, doctors and local health professionals, is difficult to describe in words, even to tell someone. I really like Arnošt Lustig and I respect him. He lived a hard life and he was able to put it into his books. It is in his books. He doesn't have to repeat it and complain that he can only say it with a hint. I've always wondered how someone who speaks the language better describes the experiences in Itibo. Sometimes students or doctors write a blog, someone takes photos, writes a diary and shoots a video. It always imprints what kind of person he is, how he perceives himself this month. Sure, I can show statistics on patients, diagnoses they've been treated with, but it only shows one side.

Every year, about twenty students and several doctors of various specializations leave our faculty for Itibo. Every month is different and yet the same. It always takes me a long time to absorb what we experienced with the last group, and a new group is here. Again explaining what is where, how to treat malaria and operate X-rays, how to operate a washing machine, how to puncture ascites, how to change a gas bomb in the kitchen behind the stove, the specifics of Kenya, a visit to the Ethnographic Museum in Kisumu or Nairobi.

Those three months are usually enough for me and I probably wouldn't be able to be there for half a year. At home, it all resonates for several months. I'm glad everyone's back home and fine. Preparations for the next three months are slowly beginning and I am already looking forward to a new group, other students who are an inspiration for me and patients we can be beneficial for. I think that the following lines will be read completely differently – the one who was not there, and the one who had the opportunity to experience it. I tried to select passages from the diary and weekly reports that I try to write in Itibo in the evenings and nights. They do not follow each other, it is a capture of random moments and it forms a mosaic of various events and stories of our patients.

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It is the first working day in Itibo, cleaning of the intensive care unit and operating room, replenishing of



materials and introducing doctors and students to the operation of the clinic. The fatigue of the whole team after a difficult journey is visible and the first patients are here. In the early evening, already on duty, a man comes under the influence of alcohol, after a motorcycle accident. Apart from minor abrasions and lacerations on the upper lip, he is without further difficulties. He gets tetanus and goes home.

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As soon as we arrived back in the house to unpack (in dark because there was no electricity), the relatives brought a 22-year-old woman, according to anamnestic data chopped with a machete. Later we add an anamnesis: the attacker was her husband. After the initial provision of massive bleeding in the area of sleep and external auditory canal, analgesia, provision of the venous access and infusion therapy, we transport the patient to the operating room. Good luck in misfortune, electricity works! Large and demanding preparation of the operating room, the team worked as best as they could. The patient was analgesic with effect using benzodiazepine, tramadol and ketamine (which we really like here for its minimal cardiodepressant effects). The extensive cut was in the temporal region - and the zygomatic arch, where it was the deepest, reaching deep into the bone. Fortunately, the blockage avoided the temporomandibular joint and was not deeper into the infratemporal fossa. According to a physical examination in the morning after the operation, the innervation of the facial nerve did not appear to be impaired. The electricity worked but not well enough for the X-ray to work. The machete cut was led backwards through the external auditory canal where the jamming was already more superficial and continued backwards to the auricle to the mastoid process (where only the superficial periosteum was disturbed). The bleeding was small in the area, very significant from the auricularis anterior artery, which we ligated and treated with another ligament after prolonged bleeding. The entire auricle, including the cartilage, was cut. After local ablation, cleaning of the wound with saline with betadine, we stopped the bleeding with the ligament of the bleeding artery and performed an extensive revision of the entire wound. The cuts into the bones were deeper, however, without dislocation and revision did not show the impact of deeper structures. After treatment of the artery, the hypodermis and derma were sutured and a pressure bandage was applied. Due to the instability of the patient we no longer sewed auricula. The performance lasted 2 hours 45 minutes plus 20 minutes preparation of the operating room. Then we transported the patient to the ICU and completely secured with non-invasive monitoring. She was also provided with antibiotics. We treated postoperative pain with morphine combined with metamizole and paracetamol with a good effect,

we also used dexamethasone (including its antiedematous action) as an additive analgesic effect. We applied Exacyl (tranexamic acid) and tetanus. The students serving all night provided intensive care, performed surgeries, and monitored the effect of analgesia. The patient woke up in the morning, oriented, with no neurological symptoms. A demanding transport to the Kisii University Hospital was followed where we handed the patient over to local health professionals for a CT scan and possible further revision, as our operation was only urgent and life-saving (we have no CT available due to instability of the patient and massive bleeding, we also did not have time for more or less cosmetic procedures on the auricle).

We were located in areas where health insurance options are very limited for the common people. The lady was not insured and it is therefore a question of whether she would have money for CT at all. As the first one we were asked at the University Hospital whether the lady had the money on it. The patient's husband ran away immediately after the incident and no one knew anything about him. We were in areas where a significant phenomenon of "double-track law" was. The official law and laws of Kenya were applied there, and the local people stacked to the customary law which sometimes solved problems in its own way. So it wouldn't be too surprising if people around her found a husband and acted according the proverb "an eye for an eye".

During the week there were several hospitalized patients – two ladies with decompensated diabetes. The first one did not take adequate oral antidiabetics and the other because of an ongoing urinary tract infection. After careful rehydration, the patients improved (we rehydrated the second one longer and had to add insulin). More people were hospitalized on the department – also a patient with abdominal pain who had withdrawal symptoms, as he was a regular user of the local alcoholic drink "changaa". One evening, dad came with a boy who had severe abdominal pain. Finally, we administered an enema – and in the morning diagnosed from the stool a parasite: entamoeba histolytica. That night, two young boys met in the room. The other "met the wall", as Divvina (local clinical officer) translated for us and had a concussion. After a long time we had a pediatric room in Itibo. The boys got a bubble blower and it turned out



that they were both lying in bed and the father of one of them was playing with a bubble blower.

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We often have patients with psychiatric diagnoses. Mental and behavioral disorders are quite specific in these areas (according to the different socio-cultural context). Affective disorders (eg various anxiety disorders) and behavioral disorders caused by substance abuse (alcohol, marijuana) can be encountered here. Many patients suffer from conversion states (dissociative disorders). It is a so-called "African disease", in essence it is a disconnection of mental and physical experience. It often happens after some mental, emotional strain, stressful event. Patients are brought to the out-patients' department in a state like coma, or are noisy and extremely altered. Just this morning, we were dealing with another very serious case. Even this patient had been running in Itibo the night before (he got through the gate) and destroyed the ambulance wiper (I hope it could be fix tomorrow). He used marijuana in the past and gradually developed symptoms of schizophrenia. He had religious delusions, shouting that Satan would come for all and that there were signs of the devil everywhere... fortunately, he improved a little after a few hours and his father came for him. In these conditions the psychiatric illness is a complete tragedy. The system of psychiatric care is not fully functional, relatives no longer knew how to deal with it. We recommended continuing hospitalization in a higher-order psychiatric hospital. They are also able to give depot antipsychotics there. During the week we also treated a patient who came for non-specific abdominal pain, nothing was noticeable on him but during the evening he developed a delirious condition. He was again a daily consumer of local alcohol "čanga", home-made spirits to which, according to local people, liquid from batteries is added. Fortunately, Tiapridal is also registered in Kenya.

Friday was a normal working day, the usual number of patients, the usual looking forward to Satur-



day was even more intense, as we had a small trip to the port town of Kisumu on the bank of Victoria Lake.

Friday's service is known as the "terminus technicus" and is seldom peaceful and the same it is in Africa. In the evening, around nine o'clock, they brought in a patient with "African disease" and then another patient ...

... very extensive and serious injuries in the area of the right cheek and eye, there is chaos in the corridors, relatives, friends. This is convenient for a power to be out. Do we have headtorch on our heads? Yes, they are within reach. Here we go? In the situation when we deal witcht extensive injuries, at first I remember Aleš's advice and calm down. It helps me, Aleš has taught me a lot. Keep calm. We're gonna make it! One must be prudent, have great respect and humility, but must not be afraid! We treat the patient in the upper surgical room, prepare a straight sieve with surgical instruments for microsurgery.

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At night, they brought a patient on a motorcycle who had ingested an insecticide (insect spray), probably based on carbamates. The patient had an argument with his father, he ate a small amount - with suicidal intent. Intoxication is always a huge problem even in the conditions of Central Europe. Doctors and students have very limited options here, they have to cope without a toxicology laboratory and rely on a detailed anamnesis and physical examination. Organophosphates have a specific odor. In this case, it was a spray substance used in agriculture. The clever medic gave the patient an infusion of atropine, together with Divina they induced vomiting with a salt solution, they monitored vital signs. Treatment is also difficult in Europe. Long-term acetycholinesterase reactivators, atropine, hemoperfusion are administered. The patient was conscious, fortunately most of the ingested substance was removed from the patient before it could be absorbed. The patient was secured in a standard ward. Organophosphate poisoning has up to 40 % mortality, even higher in local conditions, depending on the dosage.

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On Sunday, we found a bedbug on one of the beds. They must had got there from an ambulance patient maybe someone brought it from Kisumu in the past. There had never been bedbugs in Itibo before. What happened from Sunday to Thursday probably can't be described in words. During the full operation of Itibo, we moved out the two largest rooms, performed disinsection with the help of organophosphates, washed, cleaned, pickled, washed again, chaos.

Cimex lectularius, the name sounds very flashy. It is a parasite that falls in love with humans, feeding on human blood, especially at night, when exhaled carbon di-

ORBIS PICTUS

oxide lures him out of hiding. During the day they hide in beds, sheets and all possible notches and are not visible. Itchy red macules on the skin (leaky, itchy, slightly elevated small swellings). Fortunately, they do not normally transmit any disease, but bites are very unpleasant. It is treated with antihistamines and disinsection of the home. However, it is quite demanding in the Czech Republic, let alone at the equator. Organophosphate-based sprays are used here. They stink terribly, they leak, they cause eye tearing and itchy throat.



The whole team worked perfectly and the difficult situation was managed. Sometimes we really couldn't but students and doctors fought with it often with a joke, so hopefully it will be just an interesting chapter in the diary which I will not remember but I will not forget. This is Africa, it's not just nice photos of animals, safaris, photos of "action-looking young doctors", small children. It's such a job. The disinsection process was relatively logistically demanding. We were not allowed to contaminate clean laundry. It was necessary to stain all clothes, bed linen, everything. We put everything in plastic bags and local employees helped too. Over time we pulled it out, dried it and then washed it. It's just the rainy season, so everyone can imagine it. Organophosphates must not come into contact with the skin. We consulted everything with an experienced parasitologist, the National Institute of Public Health of the Czech Republic and especially with Ales Bárta (whom I remembered intensively). For several days the washing was almost at a stretch as there are few things that can fit in the washing machine, we took turns hanging clothes, cleaning, working in the outpatient department, childbirth, surgery, wards... The waste sump did not manage to hold so much water, other problems resulting from it. The sad fact was that a single bed bug was stucked somewhere and the whole process could be repeated. So we joked that it would be exactly like the end of a catastrophic film about an unmanageable virus that eventually reappeared somewhere innocently before the end titles.

There were again many patients in this hectic week. They brought 95-year-old grandmother of our midwife Faith with a fractured neck of the femur... It is raining heavily, childbirth is not progressing and it is very bad. I'm going to ICU, it's slipping under my feet. Jakub Slezák is sitting in the nurse's office.

"Hi, Kuba, how are you?" "It's fine here, consciousness without changes, patient is stable." The evening was busy in Itibo, a mass accident - three injuries. One patient is left for observation and Kuba is on duty. I find what I need and go back to the hospital - I slipp and the white pants are completely black. Elizabet: "Lucas, call for dr. Jana, its severe!" So back to the maternity house. Fortunately, we have a gynecologist in the team this month. Jana and I are going through heavy rain, she is sick, she is not feeling well all day and we are coming to the maternity hospital. The umbrella is leaky and small, it flows down our necks. Jana examines: "We need to reffer her, she needs SC". So the house is on feet, I'll meet Dorka at the door. "Can I help with?" Relatives get a transport, medics help expectant mother, she goes to Nyamira, Bětka goes with them. Itibo falls asleep, it's four in the morning...

...Africa is slowly waking up to the next day. The worries of the day before are gone, we start again. More patients, more stories, morning reports, coffee.

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Yesterday we had a female patient with thyrotoxicosis (at least it looked clinically and anamnestic). This is a serious disease with a worsening of the symptoms of hyperthyroidism. A condition that acutely threatens the patient's life. It occurs with increased thyroid function often combined with other acute diseases. The female patient was anxious, had tachycardia, hypertension, goiter. As we do not currently have the option of blood sampling for thyroid assessment, we had to start treatment based on clinical signs, physical examination, and

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anamnestic data. We administered beta-blockers, carbimazole and corticosteroids. We monitored the patient in the intensive care unit. The students monitored the pressure and checked the overall condition throughout the night. In the morning we were able to transfer her to a higher-order facility in a stable state.

Another serious patient was a woman in her forties with severe heart failure which developed dilated cardiomyopathy, but fortunately she did not go into pulmonary edema like a lady yesterday. We punctured Ascites, increased diuretics, verospirone, and she went home. She was relieved.

At present the life expectancy in Kenya is higher than in the past. The prevalence of cardiovascular and degenerative diseases is also rising. Many of our patients suffer from hypertension and diabetes. These days we have a hospitalized patient, he is 40 years old, he came because of the chronic pain, anorexia, nausea and a wound on the lower limb (abscess, a large amount of pus leaks out of it). He had reduced sensitivity to pain, polyneuropathy due to long-term poorly compensated diabetes. Great cooperation of the surgical team with the team in charge of the department. They took the patient and started caution with rehydration infusion therapy, they also added insulin. They measured blood glucose regularly throughout the night and monitored the patient's general condition. They also supplemented the injection of tetanus and antibiotics, as the decompensation of diabetes was due to an ongoing infection in the lower limb. The condition continues to develop, these days we change antibiotics, CRP is not decreasing as we have supported and we continue in the regular redressement, we compensate the internal environment, because he has hypokalaemia. Comprehensive care is provided perfectly by students and local staff.

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Another case was an elderly woman with HIV infection, severe hypoglycemia, dementia (etiologically a combination of several causes, also encephalopathy within HIV) and a very serious infection in the lower limb at admission, her blood sugar was 2.2 mmol/l. She was somnolent. We found that she had taken Metformin in combination with Glibenclamide for a long time. It is a very popular double combination here which is also part of the "guidelines" of the Ministry of Health. Glibenclamide could cause such severe hypoglycaemia, along



with anorexia, vomiting and ongoing infection. In cooperation with the surgical team and their intervention the patient gradually improved, however, a transfer to a higher-order hospital was necessary to provide longterm and follow-up care. The students monitored her blood glucose throughout the night, and despite continuous administration of concentrated sugar solutions directly into a vein, she returned to severe hypoglycemia twice a night. It was necessary to repeatedly apply 40% glucose. However, everything worked out and we were very happy that she had survived all this.

In Africa, nothing ever goes the way one imagines from romantic movies. Last time it was bugs, now it's a water pipe. We have medic Tom in the team for whom replacing the seal in the water pipe is not a problem, so we are saved! I want to use pean for it, Tom can't stand it anymore and indicated that he'd rather look at it. Many people imagine that working in a mission hospital is just an exhausting service, many patients, surgery itself. The truth is that it is often a seemingly ordinary job – cooking, washing, cleaning and repairing.

The photos are misleading, up to 80 % of people who come to Itibo have problems almost identical to Czech patients in a general practitioner's office. Differential diagnosis is a little different and the possibilities are limited. We often spend our evenings in Itibo on the terrace, talking about everything. By candlelight, the sky above the southern hemisphere, amazing atmosphere! Sometimes we watch movies or we play various games, such as: "a dog is sitting or a dog is not sitting" (hard to explain the rules). We often run to the ambulance, sometimes even in heavy rain and in the light of the headtorch on the head...

Intermezzo: Now Dorka has come here and she's given me dried meat to have the energy for writing a report and I can hear Martin from the next room: "Children, come and say the enumerating words" ...that's how we live here. They are cooking pizza in the kitchen.

Diary record September 6, 2019, Oloololo Mountains, Masai Mara National Park

... The steep slope down and the beautiful view of the whole basin together with the Mara river cannot be described, it is not even enough to see it, it must be experienced. In the morning there is a mist over the plains, the African country wakes up to the next day. The sun rises slowly and majestic elephants, giraffes, buffaloes and thousands of wildebeests are walking slowly down. I am looking at the horizon, there is something more. Something beyond man. It is not an ordinary view, it is a dialogue, a conversation. A fresh wind is blowing from the plain, slowly warming as the sun rises. In a moment, there will be unreal, scorching heat down there. I feel a light breeze on my face. The one that brings adventure, the stories of people living far away. Such a moment when at the end of the summer you start to smell the distant autumn. The feeling when the harvest is over, a thunderstorm is coming and you are going home. The wind rises lightly and something is coming. The stories of our patients resonate in my heart and head... in a few days the group will return home. I'm coming back too, three months here were challenging and wonderful at the same time. I feel the incredible authenticity of the moment...

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LOVAH Exchange Netherlands

Lenka Rudolfová

At the end of January this year I attended an exchange program for general practitioners organized by LOVAH, the Dutch equivalent of the Young Practitioners Association. The program was attended by general practitioners from all over Europe, incl. Israel. The plan was not only to look at a general practitioner office but also a large urogynecological conference in Rotterdam. After sending the candidature, we were contacted by LOVAH by e-mail with confirmation and affirmation that they were looking for "buddies" for us – i.e. hosts from the Dutch young practitioners who will accommodate us, guide us and we participate together in the program. In my case, the original doctor apologized and resigned and so I got two great hosts – Francisca

and Bart. I met Francisca on my day of arrival in Utrecht where I stayed for two nights. Unfortunately, she is in the second year of preparation, she works in the hospital so I had to go to the medical office in the village Ede to Bart. Bart is originally a tropical physician who is getting an attestation in general medicine.

Young practitioners are educated in a 3-year program in the Netherlands. They spend the first and third year in the office of a practitioner, during the second year they work at Emergency, Long Term Care Department and Psychiatry. A part of the education is a theoretical day at the faculty once a week where they take courses and write tests regularly. After completing all internships they become automatically the "certified" general practitioners. During their education they are financially supported by the Dutch government to gather experience in their colleagues' offices and abroad in the form of an annual budget. Even for the equipment of their medical bag, which is in the hands of local practitioners, they have a budget.

A general practitioner is obliged to perform emergency services two to three times a month; the tutor evaluates them for their performance at the time of preparation. Bart came back from one of these the day before our meeting.

The day at the consulting room began at 8 am. Apart from Bart and me, there were also his colleagues in preparation, a trainer, two medical assistants, four administrators, a physiotherapist at the small clinic and a pharmacy to which doctors sent the electronic prescriptions. Thus, patients could pick them up only there.

The first hour was for not-scheduled patients in the interval of 10 minutes. After that, until about noon for scheduled patients, one home visit, an hour for lunch, sitting and consulting with middle staff together, in the afternoon two hours for scheduled patients, an hour consultation with the supervisor (daily!) and in the evening an hour for telephone consultations with patients. During the opening hours we treated three sudden acute cases, mostly because of the chest pain.

A general practitioner in the Netherlands treats everyone from birth, does not carry out preventive check-ups, does not vaccinate, does not code procedures, does not print reports, does not do medical services and does not write out sick notes. At the same time, he is the only doctor for whom the health insurance company pays without the patient's contribution. Health insurance is mandatory in the country. Hospital visits are paid, but they cannot be reached, except for the emergency department, without the referral of a general practitioner. Blood tests and medications are also paid, but everything is regulated by the maximum amount of the supplementary payment, which increases slightly year by year. At the same time, they do not have crowded waiting rooms. The sampling as well as screening, including cervix cytology, are performed by a medical assistant. Gynecological check-ups are only recommended once every five years. The occult bleeding sets are sent by post and all prevention is paid by the state. The results are also assessed by an assistant and the doctor consults only the important findings. The administrator then communicates the result to the patient.

The medical documentation is not printed as I mentioned above. In the Netherlands, the network of healthcare facilities is electronically interconnected – for example, a discharge report is not given to the patient, it is sent directly to the practitioner's computer. The whole process is very fast and efficient. What happens when computers go down and records get lost, Bart replies that this is a responsibility of the IT and their backups. The patient have now the opportunity to check all records about themselves online, to read them and to complain about them. Can you imagine this in our country?

During the day we discuss several topics specific for the Netherlands. Prostitution, use of marijuana and euthanasia are legal in the country. At first I thought about the incidence of lung diseases and sexually transmitted diseases, I expected an increase. But the opposite is true – most of Dutch people are free-minded but active people who don't smoke and ride bicycles everywhere. Moreover, the prostitution is easily regulated by the state, ensuring regular checks on female workers.

The euthanasia has been legal in the Netherlands as in the first European country since 2002. About 4.4 percent of people choose it as the way of their death. Given the incident in 2016 when a doctor was prosecuted for the murder of a patient with Alzheimer's, it is a thorny issue now. Since 2019, the Dutch government has amended the law with stricter conditions for assisted suicide.

On the third day of my journey we moved individually to Rotterdam, where we were picked up by doctors from the local LOVAH association. They took us to the hotel, walked us through the city center and prepared an afternoon program for us. We visited the day center and the homeless shelter. Rotterdam is progressive in the field of "the street medicine". Since 2006 the municipality has been providing housing and health care for homeless people which has reduced crime and drug use in the city. They have been able to reduce the number of TBC cases and the homeless mortality – according to statistics; the homeless die up to 16 years earlier than their peers, often as a result of violence. However, not everybody gets the help – it is intended only for the Dutch, the foreigners are provided with the assistance with the return to their country of origin where they are dependent on local organizations. According to the social worker, a large proportion of foreign homeless people do not want to solve their situation in any way.

After a dinner in the city center and a visit to the brewery we went to a hotel, where we set off the conference on the fourth day. It was set in an old tea and coffee factory, the lecture halls were named after the themes. The whole urogynecological conference was stylishly conceived from promotional items to the closing party. Everything was in a rather entertaining form for young doctors, culminating in a dinner with music production in the early morning.

We discussed the topics of sexually transmitted diseases, prevention of conception, incontinence and transsexuality. Simultaneous translation into English was provided and I can say for all foreign participants that we were really excited.

The way back was already on my own, as was the arrival. The return to the reality of the Czech health care system was gradual but our contacts and experience will remain. I would heartily recommend the experience to all my colleagues – both as a relief from the daily routine and as an important part of the overall view.

About Pills Culture and Drug Addicts in the Previous Regime

Jolana Boháčková

Many people have very vague ideas about drug abuse in socialist Czechoslovakia. In the period between the wars, most people imagine cocaine and morphine in the artistic groups of the Prague high society but after the war it seems that socialist Czechoslovakia has dealt with drug addiction. According to historian Jan Kolář who focuses on the history of drugs, the historical sources indicate the opposite. The post-war boom in the pharmaceutical industry cultivated something the author calls a pills culture hidden behind household walls. It is then followed by a generation that created its own drug "cocktails" from available pharmaceuticals and at the same time a kind of community. He deals with the topic in a book called About a Problem That Should Not Be.

According to the author, we can speak about the modern drug addiction since the 19th century when morphine began to be isolated from opium. It was originally received by soldiers returning from wars with painful wounds. Then cocaine began to be industrially produced in Germany, it was also imported to inter-war Czechoslovakia. However, cocaine and morphine were primarily a matter for Prague and the artistic elite and the people messing about the nightlife of the metropolis. During the World War II using cocaine was declined and only morphinism persisted.

After 1945, especially in the 1950s, the pharmaceu-

tical industry developed enormously (and not only in Czechoslovakia), spewing new drugs and registering new drug groups. "In contrast to the 370 products produced by the national company SPOFA in 1950, in the quality plan for 1964/1965 we can find 487 specialties produced in Czechoslovakia, 104 imported from capitalist states and 31 from socialist countries," Jan Kolář mentions in his book. In addition, the price and territorial availability of medicines were publicly highlighted.

Unfortunately, it took several years before it turned out that the use of many preparations also had its downsides such as addiction, mental disorders and other somatic problems of users. "The cases of addiction appearing in Czechoslovakia began to grow into a mass pills culture from the second half of the 1950s. It is a broad name that includes domestication of the use of drugs on a daily basis, even in trivial difficulties or for the adjustment of mental and physical condition, especially of the middle and older generation," writes Kolář.

Drug users became addicted, usually only secondarily, "as a result of primary prescribed drug use." Typical users were not young "teenagers" who wanted to get into the special bliss.

Drugs had become a common part of home and business first aid kits due to liberal state distribution. Although some quality control of drugs existed nobody took care about investigating the possible risks of addiction.

According to Kolář, the described model of addictions continued in the 1970s and 1980s and remained dominant, however, at the end of the 1960s a new phenomenon joined it – the drug addict subculture of youth. However, it did not originate as in the west countries around marijuana, heroin or cocaine, because these "classic" drugs almost were not available in our country. Unlike the older generation young drug addicts often procured drugs in an illegal manner and often made various "cocktails" from them.

Opioids as Morphine, Dolsin, and Novopon (for example) were popular and the desire to get them caused a completely new phenomenon in the 1970s – the theft of pharmacies and drug stores. "Cases of nurses who saved opiates on seriously ill patients so that they could consume them themselves or bring them to the group were also recorded," Kolář states in his monograph. People who became part of the drug community often worked in the healthcare or pharmaceutical industries, and often wanted to get the job so that they could find and steal various preparations for their companions.

In addition to opioids, drug addicts also took Triphenidyl, various antidepressants and neuroleptics, and gradually learned to combine drugs in various ways to increase their effects. For example, they prepared a codeine solution called "A" from the commonly available Alnagon which they had known as a medicine from their parents who had often become addicted to it in order to alleviate pain. And of course we can't forget the well-known stimulant drug, made from ephedrine – meth. Synthetic volatiles are an interesting group. The "sniffers" of toluene and the cleaning detergent "Čikuli" were often only high school students and apprentices who held various sessions indoors. Unfortunately, it sometimes happened that someone did not survive these parties.

The author does not find many written sources about drug addicts from the late 1960s, because the communist party and state authorities, despite numerous warnings from psychiatrists who met drug addicts in psychiatric hospitals, pretended that the problem,"imperialist nonsense", did not exist. They had to change their attitude at the moment when the acquisition of pharmaceuticals began to be associated with more serious crime which could no longer be ignored. For example, between 1980 and 1982, the public security in Prague dealt with 56 cases of burglary in pharmacies and more than a dozen burglaries in other medical facilities. Many crimes were committed by people under the influence of drugs using violence, they stole so that they could buy drugs for a torn robbery. There was also prostitution associated with drug addiction. There are known cases where older men sustained young boys to whom they "paid"by drugs. In the 1980s, drug addiction was already spoken of as one of the problems of socialist society.

However, the overall atmosphere of the 1980s helped. Gorbachev himself in the Soviet Union highlighted the issues of alcoholism and drug addiction as one of the most pressing problems of the time. It was only a matter of time when the topic came to the fore in our country as well.

More in Jan Kolář's book – On a Problem That Should Not Be. It was published by Doplněk, in Brno in 2018.

Post Scriptum In the Year 2020

Jaroslav Veis

A popular media genre of the turn at each year is alongside balancing of the previous year prediction for the coming one. It was not different the last December. Serious news site Aktuálně.cz believed that the main events of 2020 would be in Europe next course of Brexit. The whole world would be focused on the United States, where the presidential election campaign would take place before election in November. There would be concern about future behaviour of North Korean dictator Kim Jong Un.

Lovers of sport were to look forward to Tokyo Olympics, supporters of cycling to the Tour de France and fans of Slavia Prague team to its next football league title.

But on the last day of 2019, the World Health Organization was informed by the Chinese authorities that there had been 44 case of severe pneumonia of unknown origin in the city of Wuhan. No one knew the information was totally reduced. Indeed, the SARS CoV-2 coronavirus was already running much higher in Wuhan than the Chinese had acknowledged.

From a "wet marketplace" with the official name The Huanan Seafood Wholesale market, which sold everything living and dead from cuttlefish and sardines to snakes and bats, the city, which has more inhabitants than the Czech Republic, SARS CoV-2 was spreading through the world unchecked since beginning of the year.

Projections for 2020, as well as the plans of virtu-

ally all of mankind, have been so blasted and reshaped by the organism of only 120 nanometre in size and by covid-19 pandemic. In a matter of months, it stalled the economy, slowed global trade, and caused or co-inflicted deaths of hundreds of thousands of people, particularly in both Americas.

Several dozen millions people fell ill with covid-19 disease in various forms. Also, because politicians have long been unable to decide whether covid-19 is just another "common flu" or a killer illness.

It's a pity that Karel Čapek's second most famous play "The White disease" is hardly ever staged nowadays. It is about a pandemic that broke out – in China. If it had been on stage, politicians might have admit that something once predicted by Čapek was going on.

Similarly, it's a pity that the world has nearly erased the Spanish flu from its collective memory. It killed four times as many people as the entire World War One.

(BTW, Spain was innocent of that at the time. The beginning of the pandemic can be traced to Asia, from where armies spread it around the world. It was just not mentioned in most countries due to the war censorship. Spain was sult country, so the censorship was not applied there and press reported on the new killer disease. As a result, news of new influenza has not flown around the world from the United States, where the first cas was officially reported, but from Spain.)

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But let's return to the changes of the world programme for 2020. Some countries have closed completely since early March, when the pandemic was in the full swing, others just a little, and others have changed their approach over time.

Paradoxically, covid-19 spread the most in the United States. In a country that has been the motor of major scientific and medical innovation for more than a century. The country pioneering medical research. The country which is the etalon of power and individual freedom.

And in parallel, another pandemic started in U.S., this time social and political. The unresolved racial conflict and Black Lives Matter movement have spilled over into the entire Western world in a variety of mutations, and other conflict have joined it. For too long they all have been pushed aside and unaddressed, counterbalanced by concessions from both the right and left. Fortunately, victims of this effort to rewrite history once again have been only the monuments of stone and bronze, so far.

The covid-19 pandemic was aptly described by biochemist Jan Konvalinka as something "between banality and tragedy". I'm afraid, his analogy can be generalized: the whole world is currently at the interface between banality and tragedy.

Good thing, it went as expected with Slavia Praha football title.

