American Fund for Czech and Slovak Leadership Studies

Hospital Emergency Room Knowledge Exchange

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Background

Emergency medicine (EM) is a specialty focused on providing healthcare to people who are exposed to a risk of sudden death or health impairment. It is considered basic medical specialty in many developed countries; however, until recently (4 years ago) this was not the case in Slovakia. Reason for applying in this program considers the fact, that United States has a long history of EM, thus having a long history of experience in this field of medicine and established system equipment and standards.

I work at Emergency Department in the largest hospital in Bratislava. Moreover, I started working as a doctor in one EM Service Company and last but not least, I started teaching and my PhD work at Department of Physiology at Medical Faculty under supervision of assoc. prof. Daniela Ostatnikova, MD, PhD. In addition, she is the Head of the university department dealing with international cooperation. During the last two years, she managed to contact several former medical students who now work in the United States but have Slovak origin and convinced them to come to Slovak Republic to share their knowledge. Several seminars and workshops took place in Bratislava focused on medical healthcare professionals. One of such workshops was given by the Medical Director of Hospitalist program and adjunct clinical Assistant Professor at the University of Iowa Martin Izakovic, MD, FECP and his colleagues working currently at the Emergency department at MERCY Hospital in Iowa City, Iowa, who became our partners.

I learnt about the Fulbright program by my PhD supervisor - assoc. prof. Daniela Ostatnikova, MD, PhD. I applied for Young Leaders Program by the end of March, and was invited to interview in April. My original program schedule stated that it should start during the summer months July and August. However, due to several problems (visa application, approval of the Medical Board of Iowa and the University of Iowa Hospitals and Clinics and flood that occurred in Iowa City by the end of June) I had to postpone my program by 3 months. Moreover, complicated visa application process required visa sponsorship by the Institute of International Education (IIE).

Once I received J1 visa status and confirmation from IIE by August 18, 2008, I was granted visa, bought an air-ticket and insurance, and departed for United States on 30th of September 2008 (Bratislava airport – Munich – Chicago O´Hare airport - Cedar Rapids airport). My program started 1st of October 2008, and ended on 2nd of December. I returned back to Slovakia on 4th of December 2008 (Cedar Rapids airport - Chicago O´Hare airport – Munich - Bratislava airport).

American Partners

My partner was Mercy Hospital, Iowa City, Iowa, United States, specifically Martin Izakovic, MD, FECP – Hospitalist Program Medical Director, and Stephen Sheckel, MD, FA CEP an Emergency Care Unit (ECU) Medical Director. They came to Slovak Republic giving lectures on various topics from EM, concerning ACLS, non-invasive measurement of central venous pressure, building-up EM departments, etc. The EM department, Sheckel S, MD is a director, consists of Emergency Care Unit without trauma center. My additional partner was University of Iowa, and its Emergency Medicine Department at University of Iowa Hospitals and Clinics (UIHC), under supervision of Hans House, MD, FACEP, associate chair for education and residency program director.

Emergency Medicine Department at University of Iowa is a level I trauma center. They offered me a 2-month internship program with a role of an observer and junior resident in Emergency Department of Iowa hospitals and clinics and in Mercy Hospital, Iowa City, under the personal supervision of Martin Izakovic, MD, FECP, Stephen Scheckel, MD, FACEP, and Hans House, MD, FACEP.

Brief Evaluation Statement

My expectations were fully met. I expected to do observership over UIHC and Mercy hospital and theirs ECUs, and to attend regular meetings and field trainings on various topics of EM management at UIHC. In addition, I was introduced to and learnt about management of Emergency Medical Services and AirCare Medical Services, which are extended branches of EM itself. Last but not least, I attend the ACEP (American College of Emergency Physicians) annual EM conference held in Chicago.

Detailed Description

I observed the work of emergency physicians at two ECUs for a period of two months. American healthcare is undergoing a big change since there is need for cutting down healthcare costs. In addition to my ECUs managing observing, I witnessed transformation of hospital to Hospitalists program and its benefits. I learnt the advanced techniques of patient communication, and American way of managing an emergent and urgent patient, from registration and triage, through healthcare itself to billing and funding the social healthcare programs. Part of my training included paperwork and charting management, which are necessary parts of providing healthcare. This training comes from observation, a non-formal type of education. The more formal executive trainings were held to practically demonstrate critical situations management and came with weekly 6-hour sessions of seminars that dealt with topics as scheduled:

October 2008: **Topic Coordinator:** Chris Buresh, MD, FAAP
HIV Testing; Focus Case: Pneumothorax, Hemothorax; Acute Asthma Focus Case: Cardiac contusion, tamponade, pericardiocentesis; Management of C-spine Trauma; Radiology Conference; ED Improvement; Tour d' Disaster Kit; Radiation sickness; Chemical Weapons; Biologic Agents; Blast injuries; Mock Disaster Drills in ETC; Common upper extremity injuries; Common lower extremity injuries; Pediatric Trauma; Geriatric Trauma; My bad: Head trauma pitfalls; Mass Media and Emergency Medicine; Update on the Status of EM in Chile: Future Challenges and Needs; Paralysis: An EBM Approach (or Don't Throw Away That Succinylcholine Yet).
***November 2008*:** **Topic Coordinator:** Azeem Ahmed, MD
Abdominal Pain in Elderly; Upper GI bleed; Lower GI bleed; Colitis & Diverticulitis; Anorectal Disorders; Hepatitis; Technique of a Good Patient Discharge; Joint Radiology/EM Conference: Imaging the GI tract; Pancreatitis; Bowel Obstruction; Peptic Ulcer Disease & Gastritis; Vomiting & Diarrhea in Children; Jaundice & Gallbladder Disease; Ultrasound Stations: Gallbladder/FAST; Joint Trauma/EM Conference; Endocarditis, Myocarditis, Pericarditis; Panic and Anxiety Disorder Conversion Disorder; Assessment of Depression/Homicide/Suicide in the ED; Psych Drugs Encountered in the ED; Acutely Psychotic Patient; The Art of the Code Green.

As I mentioned above, I used my visit to attend an ACEP EM conference and scientific assembly in Chicago. This covered even more topic, concerning chest pain, acid-base disorders, X-ray,CT imaging, ECG and introduction of current level of the knowledge and evidence-based medicine guidelines and protocols. Finally, I attended two 12-hour shifts with meetings at Johnson county emergency medicine service, where I learnt and observed the work and running of ambulance and emergency work outside the hospital, which allowed me to have a look at the whole spectrum of running and managing the emergency department from the professional as well as economic point of view. Currently, article dealing my experience in United States is under consideration in Journal of emergency medicine (Urgentní Medicína) for Czech and Slovak republic.

Organization and Time Schedule: My program started on 1st of October and finished on 2nd of December 2008. My arrival was expected (I arrived on 30th of September) and I could start my observership the next day. I was accommodated in International Gallery Inn, 1025 N Summit St.,

Iowa City, IA, 522 45, United States. Everything was prepared upon my arrival, there were some other international students accommodated in the inn, nevertheless, I had my private room and bathroom on my own. My training took place in Mercy hospital and UIHC in Iowa City. In Mercy hospital, I spent one day observing hospitalists, 2 days at ECU during each week for a period of 2 months. In UIHC, I spent 2 days a week (for 2 months) in ECU, where one day (Thursdays) was dedicated to seminars. A shift lasted 6-8 hours in Mercy hospital, and 4-6 hours in UIHC. By the end of the October, 27.10.-30.10.2008, there was annual ACEP conference and Scientific Assembly meeting in Chicago. This conference and meeting dealt with emergency medicine, and was not expected (since my original date of stay was scheduled to July and August) during my planning of my stay in United States. In November, I spent two additional 12-hour shifts with Johnson county EMS. My stay was clearly an observational one, as was the condition of my official sponsor organization – Institute of International Education. Since I could not provide a hands-on medical care, a 2-month period of observing was very reasonable. However, if hands-on medical care is to be part of training, one should apply and plan the stay at least 6 months ahead the application submission, because of temporary licensure that is needed and the training itself should be not less than 3 months, optimally should last for 6 months at least.

Program Cost

My actual costs were higher than expected ones. The reason for this is partly because of unexpected high monthly maintenance, where fee for accommodation per month was not lower than 1020 US$ (planned were 800 US$). Other reason of higher actual costs, was the annual ACEP conference and SA meeting, which lasted for 5 days, and accommodation as well as training seminars had to be paid (190US$ and 450 US$, respectively). Visa fees were 250 US$, nevertheless, upon arrival additional fees for background check and fingerprint proof (for allowing to enter the UIHC premises) were required.

Item	Cost Estimate US$	Actual Cost US$
Executive training seminars	500	450
Internship	3,000	3,800
Administrative fees (visa, registration fees, etc.)	250	650
International travel	1,300	1,500
Local transportation	50	65
Medical insurance	1,000	350
Monthly maintenance	1,600	2,040
Contingency	300	950
Total	8,000	9,805

Program Benefits

The United States with its long history in the provision of emergency care. Over time, guidelines were developed based on evidence-based medicine. Emergency care services have developed various techniques that are unique. EM in Slovakia is at the beginning and is only establishing protocols for EM. My program provided me with insights to new effective tools and equipment in emergency medicine. Slovakia is undergoing a healthcare reform process, where cutting costs is the most direct approach. Introducing new protocols based on evidence-based medicine approach, will help to reduce costs without decreasing in the quality of care. I have learned a number of guidelines which I would like to implement. The most effective ones and easy to implement include:

1. **Point-of-care testing**: a) cardio specific and b) urine pregnancy markers. These are faster and cheaper than traditional biochemical testing, expecting savings to hospital operative costs about € 93 000 annually.

2. **Radiology imaging savings**: a) Ottawa ankle and foot rules, b) Pittsburg knee rules - that in prospective studies showed to decrease X-ray ordering

by 30-40%, what means, once again savings to medical costs (approximately € 52 000 annually).

3. **Emergency department (ED) triage**: To significantly decrease flow time and waiting time of patients at ED. There are several guides how to successfully triage patients; we would like to follow the Emergency Severity Index version 5.

All these changes are basic but very significant ones and should be implemented on a priority basis. They should result in patients' higher satisfaction and decreased annual operative costs to ED.

Just as many other activities, medicine and healthcare rely on a teamwork approach. My responsibility in implementing the above recommendations is to coordinate and to:

1. introduce these changes to my colleagues, to present them, explaining advantages and pitfalls, prepare SWOT analysis;

2. prepare plan and timetable for sequencing the introduction of proposed changes since all changes cannot be introduced simultaneously;

3. educate patients about new procedures;

4. collect feedback of the effect of individual changes from healthcare providers as well as from patients, so I can evaluate the effect of the changes; and

5. perform research on statistical and clinical trial basis, if any of the risks mentioned below are about to occur.

Moreover to improve ED operations in our hospital and to reinforce my findings, more visits of our American partners and additional cooperation are planned. This should lead to more exchange programs, resulting in introduction of these measures into other hospitals. This exchange program and partnership was confirmed in October 2008, when University of Iowa Hospitals and Clinics signed Memorandum of Understanding together with Medical Faculty, Comenius University in Bratislava. Our American partners would help us with implementation because of their experience, especially if we encounter problem. We could help our American partners undergo changes towards hospitalists and neurohospitalists programs. The next visit of American partners to Bratislava for experience exchange is planned for March 2009.

Risks

The main expected risk is bureaucratic resistance to change. Even though the research concerning proof of the reasons for implementation in other countries already exists, this simply would be insufficient in Slovak republic. Official protocols will be not allowed to implement new standards into medical care, because of concerns about financial costs and patients' safety. This risk could be mitigated by our own Emergency Department statistical and experimental research that would prove the benefits of point-of care and other test modifications by comparing the statistics dealing with expenditures and flow times before and after implementation (decrease in cost). On the other hand, controlled clinical trials that would prove implementation of new guidelines and their safety (no significant difference in results between current gold standard and new standard) can be performed in the emergency department of the hospital with only a minimal increase in expenditures. Last but not least, patients' questionnaire about satisfaction with the stay in ED would provide evidence that the changes to Emergency Department management were correct.