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Training of Medical Rescue teams in Ghana

Szkolenie zespołów Ratownictw Medycznego w Ghanie

Ewa Zieliński¹, Katarzyna Sas², Walery Zukow³

¹Department of Emergency Medicine and Disaster Medicine, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Toruń, Bydgoszcz, Poland

²Chair and Department of Pedagogy and Didactics of Nursing, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Toruń, Bydgoszcz, Poland

³Department of Spatial Management and Tourism, Faculty of Earth Sciences, Nicolaus Copernicus University in Torun, Torun, Poland

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Summary

During the numerous trips to African countries and during the implementation of education and prevention programs in Ghana, the problem of lack of knowledge and skills in providing premedical help and handling of medical equipment among Medical Emergency Teams was noticed.

The Paramedics for Africa project was created. It was realized in 2017 in the capital of Ghana in Accra and the city of Dormaa. One of the goals of the project was medical training and equipment retrofitting of emergency ambulance teams. 81 paramedics were trained.

The work describes own experience from the implementation of an educational project.

Introduction

Accidents and other life-threatening situations are becoming an increasing problem for developing countries. The number of registered vehicles in these countries shows an upward trend, as well as accident rates and their victims [1]. Ghana is a country entering the second phase of epidemiological transformation. The large number of vehicles and the growing percentage of paved roads caused that in 24 million Ghana in 2012 in the result of post-accidental injuries about 14.5 thousand people died [2]. Mortality rates in this area show that 63% of victims die, of which up to 81% of deaths occur at the scene of accident or during transport, and then 5% during the first 4 hours of hospitalization [3].



Fot. 1. Own photo: Paramedics for Africa training

High mortality rates before delivering patients to the hospital indicate the need to develop pre-hospital care [4]. Noting this state of knowledge, it was decided to train emergency medical teams about the principles of providing assistance to victims of accidents. It is forecasted that between 1,730,000 and 1,965,000 accident victims could be saved in developing countries if the survival rate of serious injuries would be reduced to that which is found in developed countries.



Fot. 2. Own photo: Teaching resuscitation in Ghana

This would reduce the death rate of accident victims by 34-38% [5]. During the annual observations in Ghana, this issue was analyzed and it was noted that emergency rescue workers did not have sufficient knowledge and qualifications to provide medical emergency services. In 2015, the number of doctors per 1,000 inhabitants was only 0.096 and the number of nurses was only 0.926 / 100,000 inhabitants [6]. Deficits of medical personnel and the lack of legal regulations in the field of emergency medical services (as well as recruitment requirements regarding the educational level of medical personnel) makes that some employees of emergency ambulance teams do not even have basic knowledge about human anatomy and physiology nor the etiology and diagnosis of life-threatening conditions and their treatment.



Fot. 3. Own photo: Safe transportation methods training

The emergency ambulance function in the countries of West Africa is mainly limited to transporting the patient to the nearest medical facility. It was observed that emergency rescue workers in Ghana do not know and do not use safe evacuation and transport techniques. Improper handling of the patient is the cause of iatrogenic errors, and in extreme cases may contribute to the death of the victim. Attention was paid to the need to improve diagnostic and therapeutic possibilities in pre-hospital care. A competent trained medical emergency team should be able to perform a physical examination and make a preliminary diagnosis even without the use of medical equipment. He should also know and use safe techniques of evacuation and transport of the victim [7].

Authors of numerous studies regarding the training of medical personnel confirm this thesis [8]. The emergency medical system is one of the key systems to ensure the safety of citizens. In Ghana, over a dozen companies provide emergency services. Legal regulations in Ghana do not impose requirements on obligatory training or qualifications of ambulance workers. Only within the National Ambulance Service (NAS) there is an annual training program available, only for rescuers working in this unit [9].

Despite the lack of qualification requirements, other companies or entities also have the right to provide medical emergency services. According to the 2010 report by Boateng and Kratzer, to equalize the number and medical education of personnel in Ghana to the level in the United States, it would be necessary to employ 12884 trained paramedics, which would cost about 64.4 million dollars [10].

It is worrying that since the announcement of the report, not much has changed. In 2014, under the Ghana National Ambulance Service, there were 199 ambulances in 128 ambulance service stations. As part of the state medical rescue service, there were 1,665 rescuers [11].

The number of ambulances per 100,000 inhabitants was between 0.23 and 0.63. Only 59.4% of the areas were available for the ambulance in 60 minutes, and 21% of the population did not have access to the ambulance in less than 60 minutes [12].

There were 8 NAS ambulances operating in the area of Accra city [13]. In the Northern Region, the nearest to Yendi, was one NAS ambulance in Tamale, 99 km away. However, there are no statistics on the number of private ambulances in Ghana. Low qualifications of ambulance staff and the related lack of knowledge and skills in providing assistance to accident's victims pose a threat to the safety of citizens.

In connection with epidemiological changes related to increasing life expectancy, urbanization and fast transportation development in Ghana, there was a need to train employees about the basics of medical rescue operations and improving the qualifications of prehospital care staff.

For this purpose, as part of the cooperation of Collegium Medicum UMK with the Care Unit Foundation, the Obruńi comes back to Africa project was created with a pilot version of the Paramedics for Africa training. For the first time, a training formula was created. Conditions prevailing in West African developing countries, such as equipment deficits, poor access to healthcare, the occurrence of specific tropical diseases or long distances from hospitals influencing therapeutic decisions at the scene were taken into consideration.

The program involved the training of emergency rescue workers, outpatient clinics and clinics as well as hospital emergency departments in the fields of anatomy, antisepsis, psychology of rescue operations and etiology, diagnosis and emergency procedures in pre-hospital conditions. The greatest emphasis was put on helping victims of traffic accidents.

The training program included: learning physical examination, assessment of basic vital parameters and the principles of safe evacuation and transport.

The classes were conducted in English. 81 emergency workers have been trained. The program included theoretical lessons in the number of 20 hours and 40 hours of practical classes without and with the use of medical equipment in the ambulances. The program has also been adapted to the level of knowledge and qualifications of pre-hospital care staff in Ghana. Pilot training was carried out at the beginning of 2017 at the Care Unit Foundation.

The first edition was attended by two groups, including 81 healthcare workers from Accra and Dormaa. The equipment of ambulances differs significantly from equipment in developed countries. Most ambulance vehicles are equipped with only very basic medical equipment, such as: orthopedic board, cotton wool, bandages and gentian violet. There are also few ambulances equipped with advanced life saving equipment donated by foreign foundations. Unfortunately, this equipment is usually not in use, due to the lack of knowledge of paramedics in its use. As part of the project, medical rescuers were trained from usage and interpretation ECG, defibrillators and ultrasound. One-off training is of course a drop in the ocean of needs, but it seems obvious that it is worth taking the trouble to save human life [14].

Conclusion

The developing countries of Africa face numerous problems, including the lack of qualified medical staff, the shortage of life-saving equipment and the difficult access to medical care. There are many global institutions and organizations that help Ghana.

Helping the needy is humanitarian and necessary. However, it should be remembered that it should be adapted to the realities of a given country, taking into account its social, cultural and living limitations. It is obvious that it is necessary and desirable to run educational programs among developing countries.

The optimism is fueled by the willingness to share knowledge and skills in the emergency medicine of students of the medical university in Bydgoszcz in relation to the paramedics from Ghana. Both sides: paramedics from Africa and medical rescuers from Bydgoszcz declared their willingness to continue cooperation in the field of medicine. The knowledge and the medical experience gained were mutual.

The Ghanaian medical practitioners acquired the skills of helping the injured and learned how to use the equipment used in emergency medicine. Polish students - rescuers, broadened their knowledge about the distinctness of practicing medicine in conditions other than those that prevail in Poland.

It should be emphasized that it is necessary to continue the project in the coming years. It is also worth noting that the retrofitting of developing countries with medical equipment is inadequate. It is necessary to train medical personnel about use of medical equipment together with the transfer of medical equipment.

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