

NATIONAL
UNIVERSITY OF PUBLIC SERVICE
Doctoral Council

TIBOR PÁPAI MAJOR

***Military-medical knowledge and competences of
the medical officers, and junior officers, their
development opportunity***

Introduction of the author's (PhD) dissertation and the official review

BUDAPEST 2013

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Consultant: Prof. Dr. Halász László DSc, Professor Emeritus

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1. SUMMARY OF THE SCIENTIFIC PROBLEM

Because of the structural transformation of several years and the new tasks and challenges, the Hungarian Defence Force has changed into a military force that is focusing on the abilities; as a result of which the staff proportion, scope of duties, career system of the field officers, officers, junior officers and that of the crew have changed to a great extent. Changes of the recent years and the regulations that came into force resulted in the change and shifting of the competence and the duty levels that also have a big influence on all fields of the military medical service with significant historical past already.

The task system of the Medical Service of the Hungarian Defence Force is very complex and special. The provisions of the scope of duties of the multi-disciplinal military medical service have to harmonize not only with all institutions and formations of the Hungarian Defence Force but the military medical service requirements of the NATO and the European Union as well. The care staff members have to be provided with the basic and professional knowledge that suit their position so that they can fulfil their special military and medical duties. For the time being, all medical officers and junior officers who see service on all fields of the Hungarian Defence Force – also the military civil servants, after the present system – collect their upper or intermediate qualifications in their civil life where they cannot obtain the special military medical knowledge, skills and abilities on the basis of the present educational structure, with respect of the fact that it is not included in the training system.

Studying and experiencing the characters of our days, I can declare that the challenges toward the Medical Service of the Hungarian Defence Force are continuously increasing. Pure health conditions are predicted not only for the civil population but the whole staff of the Hungarian Defence Force as well, although the employment of the medical soldiers' skills for giving first aid or emergency care, who are present during the everyday service anyway, could be necessary. Besides, an immediate intervention could also be needed in the Hungarian Defence Force, as a „dangerous plant” during the provision of the special training and preparation duties, however, in this case, the application of the „civil first aid” on skill level is no more enough. The significance of the disaster management has also increased in our country. In the increasing number of qualified situations of different size (e.g.: disaster and flood-prevention etc.) the special military medical knowledge, just like CBRN (chemical-biological-radioactive and nuclear) knowledge, organisation of care in

qualified situations, special rescues, development of safety zones, checking bleeding, care of seriously injured persons, could be also needed. The national and international changes resulted in the increase of the Hungarian Defence Force's participation abroad; in these situations, out of self and mutual aid on the battle field, the medical soldiers have to outstandingly hold out on the level of the periodical care of injured persons with higher progressivity as well. Based on my own experience, in this very complex and special scope of duties, because of the shifting of the competence and ambition levels that has developed as a result of the structural transformations and in favour of learning, maintaining and developing of the professional and technical improvements on the field of military, medical and care science, it is essential to continuously train the medical staff of the Hungarian Defence Force, I think so. As the major officer of the Hungarian Defence Force and university professor, I consider as significantly important to develop a modern training structure and curriculum that harmonize with the military scientific, pedagogical, andragogical, medical and military medical expectations of the 21th century and that are suitable for the performance of the military medical duty on a high level. As a result of this, the „care taker soldier” of our days will be able to use the military force protection duties as a skill, perform medical care on the competence level, being adjusted to all situations and care taking levels, through using his continuous researching and tutorial abilities to prepare his fellow-soldiers for the self and mutual aid and healing, hereby, to improve the operation and quality index numbers of the Hungarian Defence Force as well.

On the basis of my relevant experience, I consider as essential to work out a new training system and sphere of competences – first of all for the medical officer and junior officer staff of the Hungarian Defence Force – that also harmonize with the international expectations: I laid the foundations of this in my doctoral dissertation.

2. RESEARCH GOALS

When determining the direction of my research, my main goals were as follows:

- a) With research work in the library and the archives, to perform the historical survey of the development, structure of the military medical service and the Medical Service of the Hungarian Defence Force, with especial regard to the position, role and training of the officers and junior officers. By using national and international results of the literature research as a frame of references, to determine the present position, role and scope of duty

of the medical officers and junior officers of the Hungarian Defence Force. Beyond these points of view, to lay extra emphasis on the development of the target group's training system, whether the training system and its application follow the national, international trends of the military, medical, technical, care professional, pedagogical, education-methodological and andragogical development in parallel.

- b) To study the officer and junior officer education requirements and training system of the Medical Services of the NATO, EU and the Hungarian Defence Force in order to adapt them. One important key point of the success of the participation in the international military medical service is, beyond the use of the unified systems and the supply algorithms, to transfer, develop and maintain the abilities, competences of the related staff with a unified method in order to operate effectively.
- c) To investigate the most frequent military morbidity and mortality indicators in mission and in war. During the determination of the training structure and scope, one has to pay attention to the development of the revealed indicators because the special competences of the medical officers and junior officers, the components of their special training must be compiled accordingly.
- d) After the suitable ranking of the previously revealed indicators, to gauge the military medical care knowledge of the medical officer and junior officer staff through focusing on their important abilities and competences and aiming at the recognition of their self-image with sociological means.
- e) On stable basis, through working out a professional requirement system that suits the real life, to draw up and make a proposal for a new medical officer and junior officer competence list, education, training structure that corresponds to the NATO and the EU basic principals and in which these requirements can be taught on a skill level. To draw up the career model that harmonizes with the training requirements and the career system that enables a life-long career within the service and the possibility for switching to the civil life as well.

3. HYPOTHESES

The basic hypothesis of my dissertation is that *the significant part of the medical officers and junior officers who are in service by the Medical Service of the Hungarian Defence Force does not have the modern, military medical service knowledge and abilities on the competence level that could suitably be used both in peacetime and in qualified situations*. I want to prove my basic hypothesis through the examination of further theoretical and empirical hypotheses:

- 1) In my opinion, the significant part of the medical officers and junior officers do not have any special military medical service knowledge and abilities – out of the upper or intermediate level medical qualification they acquired in their private life – that are necessary to the provision of their present duties.
- 2) In my opinion, these soldiers not only miss the special military medical service abilities that are necessary to the provision of their present duties but they also lack the ability of the military self and mutual aid that is essential for all soldiers anyway.
- 3) The medical officers and junior officers not even have the abilities that ought to be applied in case of the care of a shot-exploded injured person that is the most frequent battlefield injury and they did not apply, not even on the exercising level, the skills that should be used during the care.
- 4) I assume that the present military medical service training, education system of the Hungarian Defence Force is operating on a duty-emphasizing basis because only those medical officers and junior officers are trained for the above described abilities who are prepared for a mission abroad.
- 5) I assume that the medical officers and junior officers feel their lacks in connection with their military medical service knowledge and abilities, it means that they have a negative self-image and therefore they would be open for the improvement of their related abilities, joining a training system that harmonizes with their new suitable career system.

4. RESEARCH METHODS

1. In the frame of studying the special literature in connection with the research topic: **document analysis.**

- The historical survey of the development of the military medical service and the Medical Service of the Hungarian Defence Force. Studying of the structure of the Medical Service of the Hungarian Defence Force.
- Examination of the present training system of the officers and junior officers of the Medical Service of the Hungarian Defence Force.
- Studying of the typical military injuries in war, military conflicts, catastrophes, extraordinary situations in order to determine the competences.

2. Comparative analysis:

- Comparative analysis of the structure of the Medical Services of the NATO, the EU and the Hungarian Defence Force.
- Analysis of the military medical service training system of the studied Services in order to adopt them.

3. Probability sampling questionnaire that is well-known by the medical officer and junior officer staff in order to estimate the present knowledge level in connection with the topic.

4. Through using sociological searching methods, examination of the basic education and qualification of the medical officers and junior officers and formulation of their self-image and mission.

5. BRIEF DESCRIPTION OF THE EXECUTED EXAMINATION BY CHAPTERS

In the second part of my dissertation I surveyed the history of the military medical service's development both at home and abroad. During the survey of the historical relation I paid extra attention to the training structure of the military medical service professional staff with no medical qualification, the scope of the trainings and the duties, place of the special staff in the military medical service system of the different ages. During the analysis of the strategy, military medical service systems of the specific ages and the important duties, I clarified those activities and philosophies that I could even consider as the basis of the nowadays used medical directives of the NATO STANAG. I examined the development and

the characteristics of the domestic military medical service in details from our joining the NATO until these days. To fulfil my research goal I paid extra attention to the examination and systematization of the scientific and tutorial development and activity of the national military medical service. I tried to emphasize the important events, stages of development that had an influence on the development of the training system and the determination of the medical officers and junior officers' duties according to my judgement.

In the third chapter of my dissertation, on the basis of studying the Medical system of the Hungarian Defence Force, I outlined the present structure, emphasizing the characters of the place, role and operation of the units who take part in the training and coordination of the target group's professional. In order to realise my research goals ever widely, I performed a deep study and tried to define the scope of duties of the Medical Service of the Hungarian Defence Force after their position they have both in a team and in the central section, in peacetime and in a qualified period. Out of the national task system, both for the correspondence with the international expectations and the fulfilment of the theory of interoperability, I surveyed the place, duty and roles of the military medical service in the international military medical service system. To determine the exact duty I focused on the principle of the periodical care of injured persons and the systematization of the specific levels and the special abilities. To support the validity of the sampling I considered as important to survey the composition of the human resource of the Medical Service of the Hungarian Defence Force during which I tried to clarify the notion and legal regulation of skills, abilities, competences because of the military nomenclature. From the point of view of the examination of my hypotheses, I emphasized to study the civil professional and military medical service training of the target group and to determine the defectiveness of the system. To survey and determine the abilities of the target group, on the basis of the NATO's algorithm of the care of the seriously injured persons, I identified the competences which all medical officers and junior officers have to have on the skill level. I put the most important competences into the standpoints of my questionnaire. To determine and set up the suitable training structure, I considered as important to study the Hungarian Defence Force's present career model and its components in respect of the target group.

In the fourth chapter I published the results of my questionnaire that I made for studying the preliminaries of the dissertation's topic, proving my own experience, the drafted theses and realising the goals of the research. The complex and structured questionnaire I prepared and referred to several fields (intra-, inter-, multipersonal factors) contained 52 different types

of questions (closed, ranking, classifying and open). My questions referred to the target group's demographical characteristics, preliminary studies, training, competences, present knowledge in connection with the topic, training, demand for training and career model.

The executed survey was performed through simple random sampling with quantitative character and based on volunteership and anonymity in the circle of the medical officers and junior officers of the Hungarian Defence Force in the period between 1 April and 30 September 2012. 317 questionnaires were filled in, 4 questionnaires I considered unsuitable for the processing because they were not filled in completely, this way the number of the questionnaires that could be analysed ran to 313 in total (n=313).

I analysed the demographical characteristics of the target group that were initiated into the research, I performed the examination of the theses and the planning of all dimensions of the optimal career model and by using the modern pedagogical and andragogical knowledge I compiled the most optimal competences, abilities that support the selection of the education form and method that are adopted to them.

For the full examination of my theses I used the skills that were examined in the survey, just as rescue on the field, revival and ensuring breathing passages, peripheral catheterisation, venous catheter, infusion insert, care of different injuries, CBRN release, education, practice that is needed to the abilities of the settlement of first-aid stations and the frequency of their application in peacetime and under battle conditions. On the basis of the consideration of the pedagogical, andragogical and psychological learning-methodological recommendations, the practice of each skill at least six times with the suitable skill transmission methodology under the conditions and situation that are mostly similar to the reality, is needed to reach the application of the examined interventions on the skill-ability-competence level. Less practice only strengthen the theoretical knowledge, it does not result in full application on the skill level.

In the last part of my questionnaire, I put several questions with pedagogical intention that are suitable for self-revision, self-estimation because I considered as important to know what kind of criticism the responders address to themselves in the examined military medical service subject matter as far as their abilities, activities are concerned and on the basis of the self-revision, self-estimation I was curious whether they feel the development of their abilities for necessary, if yes, on the basis of the fulfilment of which viewpoints.

Using the new and innovative method of the competence development (Development of a curriculum) that is still less well-known in our country, in the fifth chapter of my dissertation, I compiled the competence list for the medical officers and junior officers of the Hungarian

Defence Force that has to be used by everybody on the skill level, independently from position, school qualification and degree rank. I planned the educational, training structure that is focusing on the practice and with which we can reach and maintain the application of specific competences on skill level as a result of which the medical officers and junior officers are able to completely fulfil their duties both in peacetime and in a qualified period, both on the field of the military and the civil medical service, not only at home but in international relations as well.

6. SUMMARIZED CONCLUSIONS

On the basis of the examination of my theoretical and empirical hypotheses that were drafted in my dissertation, my basic research hypotheses proved to be true, so they give a solid scientific basis for my conclusions, proposals. On the basis of the results of my researches, the facts were confirmed for me that the development of the modern military medical service training structure on the basis of the abilities and competences defined for the medical officers and junior officers that were drafted in the goals of my dissertation, is really necessary.

After defining the special training of military medical nurses, I defined the competences that are necessary to the professional training, then, in order to be able to learn these competences I worked out and made recommendations for the development, introduction and application of a new and modern training system that suits the national and international military medical service, the educational, legal and ethical requirements of the 21st century. To the training system that is developed by the suitable curriculum and output indicators, with the aim of keeping the human resources and strengthening the loyalty of the staff, I made a proposal for the adoption of a career system after qualification and ability.

With my dissertation I started a never-ending process, with respect to the fact that the development of the medical service, military medical service and the education technology assist all members of the system, independently from his position, degree of rank, qualification, through its life-long learning philosophy to survive, not only under the battled field qualified circumstances but in the medical service during peacetime as well.

7. NEW SCIENTIFIC RESULTS

During the executed revealing, analysing, systematizing scientific work, as a result of the systematization and analysis of our own experience and the data of my research, I reached the scientific results I summarized in the following theses:

- With literary research, documents analysis on the basis of the studying of the national task system of the international military medical services, I systematized with competence aspect the place, role and scope of duties of the medical officers and junior officers of the Medical Service of the Hungarian Defence Force and the situation of the professional civil and military medical qualification on the basis of the dynamics of the national training system.
- I consider as especially important that with the questionnaire, I was the first to survey the development of the most important military medical service abilities of the medical officers and junior officers to be applied in peacetime and under war/qualified circumstances and the effectiveness of their education in practice.
- After the systematization of the scope of military medical service duties, I was the first to define the knowledge, abilities, skills that can be defined as basic competence for all medical officers and junior officers to fulfil their duties on all fields of the Medical Service of the Hungarian Defence Force both in peacetime and in war/qualified situations.
- On the basis of the compiled competence list, I defined the qualification and position that are necessary to the fulfilment of duties, called military-medical special nurse qualification, then I defined the main characters of the field of the special qualification.
- I worked out the modular education system that is consisting of 3 modules to be applied in the national education system of the military-medical special nurse training, its Professional Exam Requirements with the proposal for the education-methodology of mastering these skills.
- I made a proposal for the studying of the medical officers and junior officers' career model and on the basis of the training competences for the military-medical special nurses' rank grade and scientific-researcher career opportunities.

8. PRACTICAL USABILITY OF THE RESULTS OF MY RESEARCH WORK

The abilities that were examined during the research can be used in a very wide range, it can be adopted not only to the different fields of the Medical service of the Hungarian Defence Force. With respect to the fact that the Hungarian Defence Force mostly performs its duties in peacetime, so, through the suitable maintenance of these abilities, it can also be used on different fields of the civil medical service as well, not only at home but for specific duties abroad too. The suitably structured training system and the determined competences make the military medical special staff suitable for the application of the medical military force protection duties on skill level, being adopted to all situations and treatment levels, with the application of their continuous research and education abilities to prepare their fellow-soldiers for the self and mutual aid and cure tasks, hereby to improve the operation and quality indicators of the Hungarian Defence Force.

Other applicability:

1. The special professional military medical staff with the suitable emergency aspect and abilities could significantly increase the strength of the really qualified first-aid personnel and this way the successful cases too, both in national and in international relations.
2. On the military and state programmes that are attractive and also accessible for the civil inhabitants, qualitative medical service can be provided with the initiate of the properly prepared staff, so it can be more effective for the Hungarian Defence Force.
3. Having been trained with further education methodology, the professionally well-prepared staff can fill in a significant position in the inhabitants' training for qualitative ambulance-worker.
4. The medical soldiers who were trained with the preventive philosophy and aspect of the Hungarian Defence Force can be initiated into the propagation of the public health programmes and the settlement of different campaigns.
5. The military-medical professional training that is acknowledged on order level can mean a possibility to temporarily settle the lack of special human resources on different fields of the civil medical service, even either in a planned or in the form of crisis solution.

6. The professionally trained military-medical staff can mean a significant puffer capacity for the National Ambulance Service and the Disaster Management in case of events that exceed their capacity and abilities.
7. In different regions of the country a unit can be organised from the members of the staff that can guarantee a permanent readiness that, if needed, can professionally and orderly take part in the elimination of the disasters, extraordinary situations and in the medical service within the suitable time slot.
8. Not only the Medical Service of the Hungarian Defence Force can apply the examined abilities. On the basis of the characteristics of the abilities and duties, the application of the abilities can also be expected from the staff of the Disaster Management, the Counter Terrorist Unit, the Fire Brigade and the Ambulance too in order to be able to intervene in the extraordinary and qualified situations.

9. RECOMMENDATIONS

The preparation of the competence list of the military-medical special nurse training that was drafted in my dissertation and the development, maintenance of the optimal training structure has to be treated with priority.

I make a proposal for the competent Chief to adapt and apply the requirements and training structure in an order. On the basis of the distribution of the medical officers and junior officers' proportion in the Hungarian Defence Force and the demands that were declared in the survey, the training has to be organised as an intermediate level OKJ training after the Government Decree 150/2012 (VII.6.) on the National Qualifications Register and on the procedure of amending the National Qualifications register.

If the competence list that was drafted by me and the adapted training system will be accepted and realised the first and most important duty is the preparation of the Central Education Programme of the training and the measurement of its effectiveness on the basis of modern professional, educational, pedagogical and andragogical viewpoints.

My long-term plans are to accredit the military-medical nurse training onto academic or university level through extending the competences.

With respect to the fact that the new professional training covers special subject matters from the national and international public health and military-medical service fields, from the point of view of the effective education, I consider as highly important to write and publish a

schoolbook of the modern military-medical service in a printed and e-learning form, including a digital training material that will be prepared about the special interventions.

To the effective training activity of the Skill-simulation laboratory that is being built on the territory of the Health Centrum Hungarian Defence Force Military Hospital, I also consider as important to prepare the suitable battlefield scenarios for the effective educational activity.

On the basis of the above mentioned I think so that with my dissertation I started a never-ending process, with respect to the fact that the development of the medical service, military medical service and the education technology assist all members of the system, independently from his position, degree of rank, qualification, through its life-long learning philosophy to survive, not only under the battled field qualified circumstances but in the medical service during peacetime as well. In this matter we, educators, play a significant role and have the responsibility because, on behalf of our authenticity we also have to walk a step ahead as the educator who is teaching the present practice for the experts of the next day, is teaching the past in fact.

Budapest, 20 September, 2013

Tibor Pápai major