AUTHOR'S PRESENTATION
OF DOCTORAL (PhD) DISSERTATION

UNIVERSITY OF PUBLIC SERVICE
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György Tóth

Scientific investigation of the introduction of a coroner system in the country in the event of mass incidents, disasters and natural deaths

Supervisor:

Dr. László Svéd PhD

Lt. Gen.

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FORMULATION OF THE SCIENTIFIC PROBLEM

The focus of my scientific research was the examination of the dead following an out-of-hospital cardiac arrest.

The significance of the necessary actions is extremely considerable both in the case of mass casualty incidents and disasters, as well as out-of-hospital deaths, which begin with the duties of the medical professional who arrives on the scene first, and then continue with the additional practical and administrative tasks that are necessary under the given circumstances.

As the primary objective of my research, I have analysed and evaluated the professional guidelines for the elimination of the mass accidents and disasters, their process, examined the tasks related to the dead, as well as the connected laws and procedures. The care of the injured in mass casualty incidents is organized, managed and supervised by the medical incident site commander, and the on-site tasks are regulated together with the leaders of the partner organizations, focusing on the care and the transport of the injured. However, the examination, the first care, and the initial documentation of the injured and the patients who died on the scene are the obligation of the ambulance forces, who also provide care for the injured and the patients who can be kept alive or saved.

The scientific problem connected to this matter was to determine the practical and the documentation activities of the primary tasks connected to the dead, emphasizing the possibility of a coroner's system, which would guarantee the relief of the paramedics, reducing the discrepancy between the injured and those participating in the on-site care.

In addition to the mass accidents and the disasters, my further research focused on investigating the tasks connected to the out-of-hospital deaths. At the scene of death, the ambulance unit of the National Ambulance Service, the doctor on duty or the family doctor are the first to act, there is no professionally competent specialist on site who is independent of the deceased and could offer support or suggest a review of the natural cause of death, the presumed cause of death, as well as the omission of the post-mortem examination.

As a scientific problem, I have found that the Ambulance Service only determines the fact of death, the family doctor, as a treating doctor, is not independent from the deceased, and the doctor on duty does not have enough information about the patient. In the light of all these facts, it is necessary to introduce a system that would solve and, at the same time, help with the on-site decisions related to the dead while improving the quality assurance.

A "Dead Patient Examination Card", which could be used during the medical elimination of mass casualty incidents and disasters, and would contain basic personal information about the patient, or data helping to identify them later, as well as the presumed cause of death, taking into account the obvious injuries, and the findings that can be collected at the scene of the accident regarding its circumstances and the probable time of death was a scientific problem.
In the event of an out-of-hospital death, without a mass casualty incident, the ambulance officers, as the specialists competent in determining death, produce the documentation using the form confirming the fact of death, however, its current format and content make changes necessary.
Complete electronic patient documentation can also be produced by using the aforementioned documents in a digital form and integrating them into the patient's medical history.
In my thesis, I would like to discuss the above-mentioned scientific problems, examine them and prove their practical applicability with my proposed solutions.

RESEARCH HYPOTHESES

1. **I hypothesize** that by reviewing, examining, and analysing the modern approach to the medical elimination of the site a disaster or a mass casualty incident, the needs can be identified that draw attention to the importance of the determination of death and the tasks related to the dead, and, at the same time, emphasize the duties of the ambulance forces on site, which is, in addition to the saving of life, also to perform the tasks around the deceased.
   I also hypothesize that the presence of a specialist who performs the primary tasks related to the dead victims of a mass casualty incident can make the work of the ambulance forces at the incident site more efficient, the discrepancy can be reduced, and thus the survival of the injured and the sick people can be improved.

2. **I hypothesize** that, by examining the necessary actions at the scene of an out-of-hospital death, by introducing the coroner's system, a quality assurance system can be created, thanks to which, in harmony with the system of the actions for in-hospital deaths, by providing assistance, support and, where appropriate, the possibility of a review, the "one-person" decision to determine death can be avoided, the manner of its occurrence – natural or unnatural death – can be discovered and the issue of the omission of the post-mortem examination can be addressed.

3. **I hypothesize** that a "Dead Patient Examination Card" would help in the documentation of the dead at the scene of a mass casualty incident, and the modification of the currently used form confirming the out-of-hospital death will contain the necessary information that can fill the gap in terms of the authority and the post-mortem examinations.

RESEARCH OBJECTIVES

1. **My objective** is to present and analyse the development and the historical antecedents of the disasters, highlighting the similarities that are still decisive today in terms of the medical elimination of the sites of casualty incidents, with particular regard to the historical events of domestic importance. I would like to provide a comprehensive picture of the definition and the occurrence of mass accidents, mass casualty incidents and disasters, including the legislative elements that are closely connected to their conceptual system, examining the possible risks of the disasters in international and domestic context, presenting the danger of disasters in our country, and the major events of the recent years.
   My further **objective** is to review and detail the individual steps in the medical elimination of a mass casualty incident site, emphasizing and systematizing the tasks of the incident site commander, focusing on the Triage, as one of the primary tasks, summarizing the health care system, the characteristics of the determination of death and the on-site tasks, and also presenting the cooperating organizations and their tasks during the elimination of disasters.

2. My **objective** is to present and summarize the analysis of the occurrence of death, the conditions preceding it, the possibilities of restoring the life functions, the recognition of irreversibility, and detail the certain and suspicious signs of death, the process of determining death, the tasks related to personal conditions, and the connected documentation obligations, as well as the examination of the data connected to death.
   2.1. Comprehensive analysis of the history and the characteristics of the Hungarian coroner's examination, the examination of the dead, and presentation of a coroner's tasks through international examples.
   2.2 Finding the domestic deficiencies of the current system for the determination of death and the examination of the dead, and the possibilities for its change, the reasons why it needs to be implemented.

2.3 Data collection, analysis and evaluation of the results of the domestic mortality indicators in relation to the out-of-hospital and in-hospital deaths, examining their annual changes, the common underlying causes, especially with regard to the external causes of morbidity and mortality. My further objective is to analyse the frequency of the post-mortem examinations for the in-hospital and out-of-hospital deaths, as well as to evaluate the daily mortality indicators at regional and county levels.

2.4 My **objective** is to work out the details of the national introduction of a Hungarian coroner's system, and to make recommendations for its application in practice.

3. My **further objective** is to develop and present the "Dead Patient Examination Card", as well as to develop and propose the introduction of the documentation that amends the currently used certificate of the determination of death.

RESEARCH METHODS

1. During my research work, I have used a combination of the qualitative and quantitative methods, and after exploring the scientific problem, I have also **collected and analysed statistical data**. I have applied analysis, synthesis, and adaptation tests, and while drawing my conclusions, I have also taken into account the methods of induction and deduction.
2. I have **studied** and, during the preparation of my thesis, I have **processed** the domestic and the international literature connected to the research topic, as well as the legislation on the topic, which I have analysed and incorporated into my thesis.
3. During the preparation of my thesis, I have also performed a logical and comparative **analysis** of the international terms - coroner, coroner's system - while defining the concepts and the definitions related to the topic.
4. I have **collected** the national **statistical data** necessary for the development of a coroner's system regarding the out-of-hospital deaths, and then I have synthesized my theoretical and practical conclusions connected to the system by dividing them into logical units.

5. I have **continuously consulted** with domestic and international experts, and in 2014, I have taken part in a study trip to Prague, and used its results in my thesis.
6. I have conducted a **questionnaire survey** among the participants in prehospital care, which I have used to elaborate the documentation procedures, the "Dead Patient Examination Card" and the "Certificate of the determination of death", which I suggest introducing, and have proposed and also presented in the thesis.
7. I have published the researches I have conducted, and my position related to the topic of my thesis in professional publications in English and Hungarian, I have also showed them during my presentations given at domestic and international conferences, and I have incorporated my related comments into my work.

A CONCISE DESCRIPTION OF THE CONDUCTED EXAMINATION PER CHAPTER

In the **second chapter** of the thesis, I have examined the current issues of the medical elimination of a mass casualty incident site, and after a historical review, the currently valid summary of the concepts, the rules, and the definitions was produced, supplemented with the current legislative environment. By presenting the mass incidents of the recent past, I have emphasized the relevance of the topic, analysed the characteristics of the medical elimination in detail, examined the system of care during the medical elimination, focusing on the tasks of the incident site commander, both regarding the injured, the sick, and the deceased. I have also analysed the tasks of the organizations that support the on-site health care, which play a significant role in the care of the injured and the sick.

In the **third chapter**, I have examined and presented the application areas and possibilities of the digital IT technology in the health care, especially the development and the improvement of the health care documentation and the use of the related IT system during the emergency patient care outside the hospitals.

I have examined the domestic and the European emergency response and ambulance management systems, during which the similarities that form the basis of all the advanced and modern emergency response systems and support the high-level on-site care became recognizable.

This chapter deals with the National eHealth Infrastructure (EESZT) as a system providing the background for the electronic documentation, as well as the telemedicine options and the available and applicable mobile applications that provide additional and useful assistance during the emergency healthcare. I have conducted a further examination of the Electronic Death Certificate Issuance System (eHVB), determined the direction of the future development of the dead patient examination, the IT and digital technology, which aims to further modernize the diagnostic and the therapeutic options.

In the **fourth chapter** of the thesis, I have examined the tasks related to the determination of death and the dead, detailing the process of death, its recognition, and determining the necessary duties. I have processed the personal conditions and the competences starting from the recognition and determination of death, through the current legislation and the professional interpretation, as well as the determination of the necessary documentation and the tasks in the case of natural and extraordinary, i.e. non-natural death, and I have compared the tasks in the event of deaths inside the hospital and outside the hospital. With the help of a questionnaire, I have conducted a research on the introduction and the use of a Dead Patient Examination Card, as well as the modification of the Certificate of the determination of death, and I have also presented the results. I also used the Dead Patient Examination Card during my work, in practice, which forms part of the chapter as well. The determination of death and the examination of the dead at the scene of mass casualty incidents, as well as the activities of the partner bodies in terms of the duties related to the dead, were also analysed.

In the **fifth chapter**, I have examined the domestic antecedents of the examination of the dead, the coroner’s examination, its historical characteristics, and the characteristics of the coroner's systems with the help of international examples. After analysing the changes in Hungary and the current system of the determination of death and the examination of the dead, I have presented the need to change the tasks and the administration of deaths outside the hospital, justifying the introduction of a coroner's system in Hungary.

In the **sixth chapter** of my thesis, I have elaborated the operation of a coroner's system and a draft of its detailed tasks, and, in connection with it, I have examined and analysed the Hungarian cases of death using the annual mortality indicators, the rate of the post-mortem examinations, the discovery of the primary causes of death, and supplemented it with the daily mortality data at regional and county level.

I have also presented the details of a coroner's system, the planning of the expected costs, and supplemented it with the necessary infrastructural elements.

SUMMARIZED CONCLUSIONS

I. Examination of the medical elimination of the site of a disaster, a mass casualty incident, the determination of death, the analysis of the tasks related to the dead

1. Analysing the occurrence and the historical antecedents of incidents involving a large number of injuries, illnesses, and deaths, similarities could be observed that are still decisive today in terms of the medical elimination of mass casualty incident sites, especially with regard to events of domestic importance. The definition of mass accidents, mass casualty incidents and disasters, the inclusion of the closely related parts of the legislation, the possible risks that may emerge in the international and domestic context, as well as the assessment of our country's risk of catastrophes and the major events of the recent years are also connected to the examination of the medical elimination of a mass casualty incident site.

2. I have found that by examining the individual steps and the tasks that determine the medical elimination, especially by analysing the duties of the incident site commander - the focus of which is the Triage, as one of the primary tasks -, the tasks can be determined that also emphasize the detection of on-site death, the determination of death, and the duties related to the dead during the medical elimination of a mass casualty incident site. The presentation of the health care system and of the organizations cooperating during the elimination of disasters and their tasks further strengthened my assumption.

My first hypothesis, according to which, by reviewing, examining and analysing the modern approach to the medical elimination of a mass casualty incident site, the needs can be recognized that draw attention to the importance of the determination of death and the tasks related to the dead, and, at the same time, emphasize the duties of the emergency response forces on the site to save lives in addition to the performance of the tasks related to the deceased, was confirmed. As a proof of my hypothesis, it was established, in the light of the above, that the incident site commander, who organizes, directs and supervises the care of the injured, together with the leaders of the partner organizations, regulates the individual tasks while focusing on the care and the transport of the injured, and the examination, the first care, and the initial documentation of the patients and the deceased injured also belongs to this work.

The ambulance forces, who otherwise take care of the injured and the sick who can be kept alive and saved, also perform the tasks connected to the dead.

II. The possibility of reducing the discrepancy during the medical elimination of a disaster, a mass casualty incident

In connection with my first hypothesis, I have hypothesized that the presence of a specialist who performs the primary tasks related to the fatal victims of a mass casualty incident can make the work of the ambulance forces at the incident site more efficient, the discrepancy can be reduced, and thus the survival of the injured and the sick can be improved.

In order to confirm the hypothesis, I have examined the on-site tasks related to the dead during mass casualty incidents and disasters, and analysed the current tasks, namely the determination of death, the organization of the designation of a collection place of the dead and the movement of the dead, the examination of the dead, and the connected documentation. I have found that a coroner's system would create an opportunity for the on-site work of a specialist who would perform the first steps around the dead, is also experienced in emergency patient care, and is able to relieve the burden on the ambulance staff, increasing the efficiency of those participating in the on-site care of the injured.

III. Examination of on-site tasks in case of out-of-hospital deaths, proposal for the introduction of a coroner's system

1. In order to examine the duties related to out-of-hospital deaths, I have performed a summary analysis of the occurrence of death, the conditions preceding it, the possibilities of restoring the life functions, the recognition of irreversibility, supplementing it with the certain and suspicious signs of death, the process of determining death, the tasks related to the personal conditions, and the related documentation obligation.

2. In my second hypothesis, in addition to a comprehensive analysis of the history and characteristics of the Hungarian coroner's examination, the examination of the dead, as well as the presentation of the coroner's tasks through international examples, I have hypothesized by exploring the domestic deficiencies of the current system for the determination of death and the examination of the dead, and the possibilities for its change, and justifying the needs for its implementation, that with regard to the tasks required at the site of out-of-hospital deaths, by introducing the coroner's system, a quality assurance system could be created which, in harmony with the system of the actions for in-hospital death, would provide assistance, support and, where appropriate, the possibility of a review, and thereby the "one-person" decision to

determine the death can be avoided, the manner of its occurrence – natural or unnatural death – can be discovered and the issue of the omission of the post-mortem examination can be addressed.

In order to confirm all of this, I have examined and analysed the domestic deaths, which included the rates of the omission of an autopsy, the frequency of the occurrence of the presumed causes of death, and the number of the annual and daily deaths, broken down at national, regional, and county level as well. I have found that the number of the post mortem examinations carried out after the out-of-hospital deaths is significantly lower than the post mortem examination rates of in-hospital deaths, and with respect to deaths attributable to external causes, in an average of 8-10% of the deaths per year, the post mortem examination is not performed.

I have formulated that the research goal connected to the hypothesis is the detailed development of the national introduction of a coroner's system in Hungary, made proposals for its application in practice, for the conditions of the operation of the system, which were fulfilled, therefore my hypothesis was confirmed.

IV. Examining the documentation connected to the dead, the possibilities of their application

1. During the analysis of the documentation related to the dead, I have found that the primary documentation of the dead at the sites of disasters and mass casualty incidents requires a properly usable "Dead Patient Examination Card", which fills in the gaps and supports the work of the on-site healthcare providers, can be completed quickly and easily, and contains important information about the deceased.

2. By amending the currently used form for the confirmation of out-of-hospital deaths - "Certificate of the determination of death" - the necessary information that is relevant for the authority and post-mortem examination can be recorded and saved. I have conducted a questionnaire survey regarding the practical application and the introduction of the documents, and also examined their applicability during my work. As a proof of my third hypothesis, I propose introducing both documents, since their use is of outstanding importance during the on-site documentation of the deceased.

NEW SCIENTIFIC RESULTS

1. Examining and evaluating the system of the medical elimination of mass incidents, ***I have found*** that in order to carry out the primary tasks related to the dead, the presence of a specialist is necessary at the mass casualty incident site, who relieves the burden of the medical incident site commander and the ambulance forces that provide patient care and transport of the injured and the sick, and, ***at the same time, I have proved*** that the discrepancy between those providing care and the patients requiring care can be reduced, thereby improving the chances of the survival of the injured.
2. I have ***researched*** the steps to be taken regarding the out-of-hospital deaths, I have ***analysed*** and ***evaluated*** the connected on-site mortality indicators, which show the different number of the post-mortem examinations compared to in-hospital deaths, and I have also ***concluded*** that in some deaths attributable to external causes no post-mortem examination is performed, and in such cases, the possibility of extraordinary death also arises. Based on the above, ***I was the first to propose*** the introduction of a coroner's system, which can provide a competent specialist in emergency care, in the determination of death, and the examination of the dead at the scene of all out-of-hospital deaths.
3. ***As a result of my investigation***, I have ***elaborated*** the conditions for the introduction of a coroner's system, which increases the efficiency of the medical elimination of the incident site, and also creates a quality assurance system which, in harmony with the system of the actions for in-hospital deaths, provides assistance, support and, where appropriate, the possibility of a review, and thereby the "one-person" decision to determine the death can be avoided, the manner of its occurrence – natural or unnatural death – can be discovered and the issue of the omission of the post-mortem examination can be addressed.
4. For the primary documentation of the dead at the sites of disasters and mass casualty incidents, ***I was the first to develop*** the "Dead Patient Examination Card" in its current version, which supports the work of the on-site ambulance staff.

   I have ***made a proposal*** to amend the currently used form confirming the out-of-hospital deaths, and accordingly, it contains more detailed and more accurate information, which is necessary for the decisions related to the authority and post-mortem examinations.

RECOMMENDATIONS OF THE THESIS

1. Providing specialized further training for professionals with academic degrees in healthcare, who are experienced in emergency patient care, basically ambulance officers, or even for professionals participating in university-level (MSc) trainings under the guidance and support of the Institutes of Forensic Medicine of the Hungarian medical universities and the National Expert and Research Center, who, by acquiring pathological, as well as theoretical and practical knowledge in the forensic medicine may be suitable for performing the coroner's duties.

2. The duties of the professionals trained to deal with the dead can be incorporated into the domestic procedures and protocols for the medical elimination of mass casualty incidents, naming the tasks that relieve the burden of the ambulance units that provide patient care for the injured and the sick.

3. By amending the Hungarian system for the examination of the dead, the coroner's activity can be authorized by law, specifying the tasks related to the determination of death, the examination of the dead, other tasks connected to the dead, and its documentation, including the electronic documentation obligations.

4. The proposal to introduce a "Dead Patient Examination Card" and to amend the "Certificate of the determination of death" document.

THE PRACTICAL USABILITY OF THE RESEARCH RESULTS

1. Applying a coroner's system in practice creates the opportunity to perform the initial duties related to the fatal victims of mass accidents and disasters, thereby reducing the discrepancy between the ambulance units and the injured requiring care.

2. In relation to the on-site deaths, during the examination of all persons who deceased outside the hospital, the coroner's presence can provide support and, if necessary, the option to review the determination of death, the recognition of the manner of its occurrence, and the omission or the confirmation of a post-mortem examination, avoiding the potential risks of "one-person" on-site decisions and the possibilities of an error.

3. I recommend the use of the "Dead Patient Examination Card" and the amendment of the on-site document confirming the determination of death for the participants both in the development of procedures and in prehospital care who are using such documents.

THE DOCTORAL CANDIDATE'S LIST OF PUBLICATIONS ON THE TOPIC

1. György Pápai, Ildikó Rácz, Gábor Tamás Szabó, György Tóth, Béla Muzsik, István Mártai, Zsigmond Göndöcs, István Édes: Initial experiences gained with the transtelephonic ECG system during the prehospital care of the acute coronary syndrome in the North Great Plain region
   Cardiologia Hungarica, Year 40, 4. 2010, pp. 268-272. ISSN 0133-5596
2. György Tóth: Medical elimination of a mass casualty incident site contaminated with hazardous substances
   Bolyai Review, Year XX, 1. 2011, pp. 29-44. ISSN 1416-1443
3. György Pápai, Ildikó Rácz, Szabolcs Szilágyi, Miklós Szokol, István Mártai, László Gorove, Zsigmond Göndöcs, György Tóth, János Hegedüs, Béla Muzsik, István Édes: We would have lost this patient…
   Cardiologia Hungarica, Year 41, 2011, pp. 3-5. ISSN 0133-5596
4. György Tóth: The importance of handling hazardous medical waste during emergency patient care
   Bolyai Review, Year XXI, 1. 2012, pp. 55-65. ISSN 1416-1443
5. György Tóth, András Huszár, Tímea Kormos: About the coroner's system in general
   Military engineer, Year VI, 4. 2011, pp. 121-128. ISSN 1788-1929
6. György Tóth: Brugada syndrome or epilepsy?
   Volume of Abstracts, Pécs, 14. 2011

7. György Tóth: Examination of the introduction of a coroner's system in Hungary
   The conference volume "Military Science and the 21st century", 2014, pp. 203-219.
8. György Tóth, György Pápai, János Hegedüs: The lesson of tragic carbon monoxide poisoning
   Hungarian Ambulance Service, Year XXIX, 1. 2015, pp. 34-35. ISSN 0209-7060
9. György Tóth: Healthcare interventions and modern devices, the use of devices in the emergency patient care, pp. 883-923, 1010-1067, in: József Betlehem: Theoretical and practical foundations of emergency care, Medicina, Budapest, 2015.
10. György Tóth: Coroners' work in Hungary in the 19th and 20th centuries
    Military Engineer, Year XII, 3. 2017, pp. 306-311. ISSN 1788-1929
11. György Tóth: Actual issues of the determination of death and the examination of the dead on the scene of major accidents and catastrophes
    Review of military science, Year X, 4. 2017, pp. 550-565. ISSN 2676-9816
12. György Tóth: The activities of organizations that carry out and support the medical elimination of the consequences of mass casualty incidents and disasters
    Military Engineer, Year XV, 3. 2020, pp. 231-239. ISSN 1788-1919
13. György Tóth: The process of death, the primary tasks related to the dead in prehospital emergency care
    Review of military science, Year XIII, 4. 2020, pp. 181-194. ISSN 2676-9816
14. György Tóth: Electronic Documentation and Digital, IT Technology in Pre-Hospital Emergency Care
    Military Engineer, Year XVI, 4. 2021, pp. 69-182. ISSN 1788-1919

Lectures:

1. György Tóth: Fatal mass accidents, the tasks of the National Ambulance Service, International Conference on Forensic Medicine, Debrecen, 19 May, 2010.
2. György Tóth: The duties of the National Ambulance Service related to the care and the transport of infectious patients
   Prevention of infections and their spread along the state borders, international conference, Fehérgyarmat, 6 August, 2010.

3. György Tóth – György Pápai – István Papp: "Earthquake in Szabolcs" Experiences of a disaster drill
   13th Scientific Conference of the Hungarian Military and Disaster Medicine Society, Budapest, 1 December, 2010.
4. György Tóth: Brugada syndrome or epilepsy?
   Emergency Days in Pécs, Pécs, 30 September, 2011.
5. Orsolya Tirpák – György Tóth: On-site determination of death during the emergency care
   16th Wandering Meeting of the Hungarian Oxiological Society, Budapest, 12 May, 2012.
6. György Tóth: Characteristics of the on-site care for Acute Coronary Syndrome and Stroke
   3rd Primary Care Conference, Nyíregyháza, 25 October, 2012.
7. György Tóth – György Pápai: Duties of the Hospital Emergency Services
   Hungarian Chamber of Health Professionals, 1st National Professional Conference, Budapest, 13 September, 2013.
8. György Tóth: Examination of the introduction of a coroner's system in Hungary
   Conference "Military science and the 21st century", Budapest, 14 February, 2014.
9. György Tóth, György Pápai: The lesson of tragic CO poisoning
   17th Wandering Meeting of the Hungarian Oxiological Society, Szombathely, 17 October, 2014.
10. György Tóth, György Pápai: TTECG in the practice of the National Ambulance Service and its results
    3rd Emergency Medicine Forum, Scientific Congress and Further Training Course, Debrecen, 28-29 April, 2017.

THE PROFESSIONAL-SCIENTIFIC BIOGRAPHY OF THE DOCTORAL CANDIDATE

Name: György Tóth
Place and date of birth: Szerencs, 1 April, 1976

Studies:
2002: Graduated as at the College Faculty of Health of the Medical University of Debrecen an ambulance officer
2009: Graduated at the János Bolyai Faculty of Military Technology of the Miklós Zrínyi University of National Defence, and obtained a bachelor's degree and a master's degree as a defence administration manager.
2019: Graduated at the Faculty of Public Health of the University of Debrecen, and obtained a bachelor's degree and a master's degree as a healthcare manager.

Professional Career:
From 1995 to the present: employee of the Nyíregyháza ambulance station of the National Ambulance Service, initially as a paramedic;

- since 2002: active ambulance officer;
- since 2008: head of the Nyíregyháza ambulance station;

- since 2004: lecturer at the Department of Oxiology of the University of Debrecen

Language skills:
He has passed the general intermediate level and advanced level complex language examinations supplemented with special IT language skills in English, and the general basic level complex language examination in Russian language.

Membership in professional organizations:

- Member of the Hungarian Military and Disaster Medicine Society
- Member of the Hungarian Resuscitation Society

Teaching skills and competences:

- since 2004, he performs teaching, instructor's, and course leader's duties during the annual further training of the National Ambulance Service, in the training of paramedics, ambulance drivers, ambulance officers, and emergency physicians,
- instructor in secondary schools, and in the training of ambulance officers and social workers;
- Lecturer in the ambulance officers training at the University of Debrecen.

Other skills and competences:

- European Resuscitation Council, EPLS provider;
- European Resuscitation Council, BLS/AED instructor;
- European Resuscitation Council, ALS provider;
- International Trauma Life Support instructor;
- RSI instructor;
- completed his training as an incident site commander at the Association of the Hungarian Ambulance and Ambulance Officers.

Budapest, 7 August, 2023.

György Tóth