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## FOREIGN EXPERIENCE IN TRAINING OPERATORS OF THE EMERGENCY ASSISTANCE SYSTEM FOR THE POPULATION VIA A SINGLE TELEPHONE NUMBER 112

Fursa V.V.,

Candidate of Law, Associate Professor of the Department of Tactical and Special Training Dnipro State University of Internal Affairs ORCID ID: https://orcid.org/0000-0001-5962-8327

## Фурса В.В. Зарубіжний досвід підготовки операторів Системи екстреної допомоги населенню за єдиним телефонним номером 112.

У статті автор вказує, що в Україні створений державний механізм реагування на звернення громадян, які опинилися в надзвичайній ситуації. В структуру цього механізму входять: Державна служба України з надзвичайних ситуацій (ДСНС), Національна поліція України, екстрена (швидка) медична допомога, аварійна газова служба, інші аварійні служби. Проте викликати такі служби не зовсім зручно, оскільки виклик здійснюється за різними телефонними номерами. Інтеграція України в європейську спільноту вимагає від України переглянути механізми захисту людини, яка попала в надзвичайну ситуацію, зокрема запровадити механізм реагування на звернення громадян через єдиний телефонний номер 112. Прийнятий 07 вересня 2022 року Закон України «Про внесення змін до деяких законів України щодо вдосконалення системи екстреної допомоги населенню за єдиним телефонним номером 112» містить у своїй структурі юридичні підстави для впровадження в Україні єдиного центру прийняття, обробки та реагування на звернення надзвичайного характеру. Також цей Закон покликаний об'єднати всі екстрені служби в єдину систему, що дозволить створити належний рівень реагування на надзвичайні ситуації, надання екстреної допомоги, максимально ефективно залучати декілька екстрених служб для реагування на ситуації.

Для належного функціонування Системи екстреної допомоги населенню за єдиним телефонним номером 112 необхідно також підготувати і професійний кадровий апарат. Метою статті є аналіз зарубіжний досвіду підготовки операторів Системи екстреної допомоги населенню за єдиним телефонним номером 112 з метою його імплементації в систему підготовки кадрів в Україні.

У висновках автор вказує, що система підготовки операторів Центру 112 яка діє в Естонії є однією з кращих у світі і може бути запозичена для реалізації в Україні. «Система екстреної допомоги населенню за єдиним телефонним номером 112» є досить складним механізмом для впровадження якого, крім аналізу позитивного зарубіжного досвіду, необхідно залучити досить широке коле спеціалістів з різних галузей, а тож створити належну нормативно-правову базу для врегулювання взаємодії між різними службами реагування.

**Ключові слова:** системи екстреної допомоги населенню за єдиним телефонним номером 112, центри реагування на надзвичайні ситуації, екстремальна ситуація, надзвичайна ситуація, рятувальні служби.

## Fursa V.V. Foreign experience in training operators of the Emergency Assistance System for the population via a single telephone number 112

For a person who finds himself in a situation where there is a threat to his life or health, or the life or health of his relatives, the time within which the competent authorities will come to his aid is critically important. In order to respond to emergencies in a timely manner, Ukraine has established a mechanism for responding to citizens' appeals. This mechanism includes the State Emergency Service of Ukraine, the National Police of Ukraine, emergency (ambulance) medical care, emergency gas service and other emergency services. However, it is not entirely convenient to call these services for help, as the call is made by different phone numbers and in situations where a variety of phone numbers will lead to a loss of time and serious consequences.

Ukraine's integration into the European community requires our country to review the mechanisms for protecting a person in an emergency situation. It is established that the main purpose of

implementing the system of emergency assistance to the single telephone number 112 in Ukraine is to provide timely assistance to European level with the ability to communicate in foreign languages, prompt involvement of necessary emergency services, which is a decisive factor in providing assistance, emergency response.

The article also considers the issues of training employees who receive calls to the single emergency number «112», their interaction with each other during the performance of duties at emergency response centers, as well as their interaction with employees who directly provide assistance to scene. It is established that the training of operators who organize the rescue operation is carried out at the police academy.

The training system for 112 Centre operators in Estonia is one of the best in the world and can be borrowed for implementation in Ukraine. At the same time, the «Emergency Assistance System for the Population via a Single Phone Number 112» is a rather complex mechanism for the implementation of which, in addition to analysing positive foreign experience, it is necessary to involve a fairly wide range of specialists from various fields, and therefore to create an appropriate regulatory framework to regulate the interaction between different response services.

**Key words:** systems of emergency assistance to the population by a single telephone number 112, emergency response centers, emergency situation, emergency situation, rescue services.

**Problem statement.** At all times and epochs, people have wanted to feel safe in society. To be protected from encroachments on their private space, honour and dignity. To have certain guarantees, rights and freedoms[1]. Art. 3 of the Constitution of Ukraine states that a person, his or her life and health, honour and dignity, inviolability and security are recognised in Ukraine as the highest social value. Human rights and freedoms and their guarantees determine the content and direction of the state's activities, and the state is accountable to the individual for its activities. Affirming and ensuring human rights and freedoms is the main duty of the state. In order to implement these constitutional provisions, Ukraine establishes and operates state bodies whose main purpose is to protect the rights and interests of individuals, including the protection of persons in an emergency situation.

For a person who finds himself or herself in a situation where there is a threat to his or her life or health, the life or health of his or her relatives, friends or people around him or her, in a situation where there is a threat of destruction or damage to property or a threat of violation of public safety, etc., the time within which the competent authorities

will come to the aid of such a person is of critical importance. In order to respond in a timely manner and protect individuals from such threats, Ukraine has established a state mechanism for responding to appeals from citizens in an emergency situation. The structure of this mechanism includes: The State Emergency Service of Ukraine, the National Police of Ukraine, emergency (ambulance) medical care, emergency gas service, and other emergency services. However, calling these services for assistance is not entirely convenient, as the call is made through different telephone numbers and in situations where, for example, a comprehensive response from several services is required, a variety of telephone numbers will lead to a loss of time and, as a result, to serious consequences, as the applicant needs to determine which service should be called first.

Ukraine's integration into the European community requires our country to review the mechanisms for protecting people in emergency situations. For the first time, the 112 emergency service was discussed in 2008, when the government designated the Ministry of Emergency Situations as responsible for the creation and implementation of the system[2]. The system of emergency assistance to the population was implemented especially actively during the preparation for the Euro 2012 championship. Thus, on 13.03.2012, the Law of Ukraine «On the System of Emergency Assistance to the Population by a Single Telephone Number 112» was adopted[3]. The main purpose of the system was to ensure the functioning of a single emergency call number «112» for use in all emergency situations, to provide citizens with timely assistance of the European level with the ability to communicate in foreign languages, to promptly engage the necessary emergency services, which is a crucial factor in providing assistance, eliminating emergencies and rescuing people[4]. However, despite the existing regulatory framework for the functioning of the emergency assistance system, the project has not been fully implemented.

The idea of creating a system of emergency assistance to the population via a single telephone number 112 was revisited in January 2020. In particular, a pilot project to create a single emergency number in Kyiv, Kyiv and Dnipro regions was presented[5]. The government has been amending regulations to speed up the implementation of the emergency assistance system by calling a single telephone number 112. In particular, on 21 July 2021, the Cabinet of Ministers approved amendments to the Order of 28 May 2008 No. 770 to ensure the functioning of an interagency group that will manage and monitor the implementation of the emergency assistance system by calling a single 112 number. As noted in the explanatory note, due to the formation of the new Cabinet of Ministers, the interdepartmental group «is not actually functioning», and the changes made should restart the work of the authorities to implement the emergency assistance system by a single number «112»[6].

On 07 September 2022, the Verkhovna Rada of Ukraine adopted the Law of Ukraine «On Amendments to Certain Laws of Ukraine on Improving the Emergency Assistance System for the Population by a Single Phone Number 112», which entered into force on 30 December 2022. The Law creates the basis for the introduction of a single centre for receiving and processing emergency calls in Ukraine. In fact, all services - 101, 102, 103 and 104 - will be united into a single system, which will ensure a better level of emergency assistance and promptly involve several emergency services in case of emergencies[7].

Art. 3 of the Law of Ukraine «On the System of Emergency Assistance to the Population by a Single Telephone Number 112» states that the 112 Service is a public safety answering point (PSAP) and a structural unit of an institution that belongs to the sphere of management of the Ministry of Internal Affairs of Ukraine[8], and therefore we can conclude that the selection and training of personnel for the 112 System should be carried out by those educational institutions that are under the management of the Ministry of Internal Affairs of Ukraine.

**Previous research.** Despite the high relevance of the problem, the functioning of the emergency assistance system and the issue of staffing the 112 System have hardly been studied by scholars. The issue of creating an automated system of emergency assistance to the population through a single telephone number «112» was considered by R. Dziubanenko, O. Dodonov, Y. Zhydovlenko, O. Koval, M. Mayurov, P. Tsepkov. Certain issues of using the system of emergency assistance to the population through a single telephone number «112» were considered by D. Kobylkin and M. Mandrona. The foreign experience of functioning of emergency assistance centres for the population under the single telephone number «112» has not been reflected in the legal literature.

The purpose of the article. Given the above, the main purpose of our study is to analyse the foreign experience of training future operators of the Emergency Assistance System to the population by a single telephone number «112»

**Summary of the main material.** A preliminary analysis of foreign experience suggests that, depending on the country, the training period for a future Centre 112 operator ranges from two weeks to several years. In particular, in Spain, the training process lasts only 15 days, during which the future operator must complete 3 modules. The first module is about learning the general algorithm for

receiving calls. During this module, students also get acquainted with the operator's workplace and learn call processing software. The second module is devoted to the study of operational procedures for managing the main types of emergencies. The third module is scenario-based training and practice. The entire training process is accompanied by listening to recordings of real calls and their subsequent analysis.

In Romania, future operators complete a 2-month theoretical course at a special training centre, after which they are sent for a month-long training at the 112 Centre under the guidance of an existing Centre operator.

In Sweden, operators are trained in several stages. Before being accepted for training, candidates are tested and interviewed for their ability to make quick decisions, as well as their ability to multitask and work in critical conditions. The first (initial) stage of training lasts 7 weeks. During the initial stage of training, future operators learn the basics of ethics, crisis psychology, risk management, stress management techniques and methods of overcoming it, interviewing techniques, as well as get acquainted with the operator's workplace and learn the software they will use in the future. A separate module is «telephone medicine», during which students study human anatomy, symptoms of the most common diseases, and undergo theoretical and practical training in BLS.

A separate module of training at the first stage is technical modelling and training on call taking, which also involves existing operators who have the skills to conduct training sessions. The main tasks of the operators involved in the training are to simulate technical malfunctions of the call reception system, as well as call modelling (modelling the behaviour of a person who has called the 112 service), analysis and «correction» of the behaviour of future operators when communicating with applicants. A separate module of the 7-week training includes a one-week on-the-job training at the operator's workplace.

Following the seven-week training programme, students spend another four to six weeks on the job training under the supervision of an existing operator. At the end of this training, the student must complete a series of certified tests to confirm the knowledge and skills they have acquired. After that, the student is hired with a three-month probationary period, during which his or her professional skills are assessed by the immediate supervisor. At the end of this period, the person is finally hired, and further control is carried out through random call screening, as well as by passing certified tests every 12 months. It is worth noting that such tests are a prerequisite for continued employment and failure to pass them will be grounds for dismissal.

In Lithuania, the training programme consists of 3 months of theoretical training and 2 months of practical training.

In Portugal, future 112 operators are selected from the National Police and the National Guard. They undergo 4 weeks of theoretical training and 2 weeks of practical training. Then they undergo another one-month theoretical training course and a 2-week practical training course. Upon completion of the training, the police officer is appointed to the position of operator with a 2-month probationary period.

In Estonia, the training of future 112 Centre operators is conducted at the Välke Maarja College - Academy of Security Sciences and lasts for 10 months, starting in September and ending in June. To train them, the academy has set up an operator training centre. The course is worth 60 ECTS credits and lasts 40 weeks. 1 ECTS credit consists of 20 hours of practical training and 6 hours of independent work. The training is divided into modules. The first module is introductory. It is worth 4 (four) ECTS credits. During the introductory module, students gain knowledge about their future profession (introduction to the speciality), as well as learn the basics of criminal and administrative law, constitutional law. The first module also includes an introductory practice at the Emergency Response Centre lasting 3 days. The second module is dedicated to the study of police activities. Seven (7) ECTS credits are allocated for its study. Students study the legal acts that regulate police activities and gain knowledge of the procedure for police actions at the scene of an incident. The third module is dedicated to the study of rescue services. Six (6) ECTS credits are allocated for its study. Future operators study the legislation that regulates the activities of rescue services, study explosion safety, and the procedure for acting in various extreme situations. The fourth module is dedicated to the activities of medical professionals. This module is one of the largest, as the vast majority of challenges relate to situations involving the need to provide first aid to injured persons. Fifteen (15) ECTS credits are allocated for the study of this module. During this module, students study the protocols of action of medical staff, algorithms and principles of first aid depending on the nature and extent of injuries and depending on the condition of the victim, the procedure for transporting/transferring the victim, gain knowledge of the main signs of impaired vital functions, etc. The fifth module is devoted to the study of the Emergency Information System, a computer programme that receives calls to the 112 number and determines the priority of assistance. The module is worth 18 (eighteen) ECTS credits. The information system for processing emergency messages has a complex structure. The main element of the system is a questionnaire - a section of the programme based on the principle of «question» – «answer» – «next question based on the answer». That is, depending on the applicant's answer, the system automatically determines which next question should be asked of the applicant. Most of the questions in the questionnaire are formulated in such a way that the applicant can only answer «Yes» or «No». The questions do not contain legal or other complex professional terminology. This is done in order to determine the situation as soon as possible and respond to it promptly. In particular, having received answers to 2-4 questions, the Emergency Information System is already able to determine the priority of the call, and the time for dispatching the relevant services is up to 30 seconds. With the maximum call priority, the response time is up to two (2) minutes.

In addition to receiving calls via the 112 emergency number, the Emergency Information System receives alerts from automatic fire detection systems, emergency notifications via SMS, and emergency messages sent by the eCall car security system.

The structure of the fifth module also includes two (2) training practices at the Emergency Response Centre - winter and spring. During the winter internship, students begin to receive so-called «light» calls, but the main purpose of this internship is to study in depth the specifics of the activities of operators organising a rescue operation and the Centre in general. During the spring internship, students already handle all calls, but under the direct supervision and control of the current operator of the Emergency Response Centre.

The sixth module of the training for operators organizing a rescue operation contains a number of elective disciplines: handling calls in English, handling calls in Russian, professional Estonian, professional English, professional Russian, handling calls of increased complexity. The future operator independently determines the disciplines that he or she will need in his or her future activities. Nine (9) ECTS credits are allocated for the study of elective courses.

Based on the results of the training, future operators pass a comprehensive exam, which is allocated one (1) ECTS credit. All students who pass the comprehensive exam receive a certificate of professional education and are assigned to work in one of the four (4) emergency response centers.

The structure of the operator-logisticians includes active police officers, coastguards, and rescue services. The logistician operator is connected to the call processing at the moment when the operator organizing the rescue operation has determined the nature of the emergency, i.e. at the moment when it is determined which

services are responsible for responding to this situation. If the situation requires the intervention of several services, the operator organizing the rescue operation shall involve logisticians from different services (police, rescuers, medics, etc.) in the call processing. The structure of logisticians also includes a medical officer, but unlike police and rescue logisticians, he does not send medical teams to the scene. His/her main duty is to manage the applicant's actions to provide first aid, maintain the victim's vital functions in a stable condition/restore the victim's vital functions until medical assistance arrives.

Logistics operators are trained directly at the workplace. The requirements for police logisticians are more stringent. A police officer with experience in patrol police, i.e., with experience in responding to situations that arise «on the street,» may be appointed to the position of police logistician. Senior operators play the role of direct shift supervisor. Usually, a shift is covered by two (2) senior operators, one from the police and one from the rescue service. The police operator is in charge. To be a senior operator, you must have a university degree in the field of work. The main responsibility of the senior operators is to manage the teams at the scene in case of a complex emergency. The senior operator carries out such management until a person arrives at the scene to take direct charge of the rescue operation[9].

All operators are located in a common room, each at their own workstation. When communicating with an applicant, operators use headphones with a microphone, leaving their hands free to work in the Emergency Notification Processing Information System[10].

In Finland, the training of a 112 center operator takes at least 1.5 years and includes both theoretical and practical training. The training is conducted at the Police College and focuses on the comprehensive processing of emergency calls, transferring the call to the appropriate response units, and providing advice to callers. The training process includes a large number of classes on a special simulator at the college and practical training at the Emergency Response Center. A diploma of higher police education gives the right to work as a 112 Center operator without training. In addition, every existing operator must take a special refresher course for one week a year.

**Conclusions.** Summarizing the above, we note that the use of positive foreign experience allows us to quickly and efficiently achieve international standards of emergency assistance to the population through a single telephone number 112. Since it is impossible to analyze the experience of training operators of the 112 emergency telephone number system in all developed countries, we focus only on certain training programs that, in our opinion,

have been most successfully implemented and at the same time meet the current challenges facing our country.

We believe that the training system for 112 Center operators in Estonia is one of the best in the world and can be borrowed for implementation in Ukraine. At the same time, the «System of Emergency Assistance to the Population by a Single Phone Number 112» is a rather complicated mechanism for the implementation of which, in addition to analyzing positive foreign experience, it is necessary to involve a fairly wide range of specialists from various fields, and therefore to create an appropriate regulatory framework for regulating the interaction between various response services.

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