

## **An Evaluation Of The 112 Emergency Medical System And The Misuse Of The 112 Emergency Call Center In Turkey**

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### **Introduction**

The spread of common values in political, social, economic, and cultural areas between countries in an unbounded global manner has affected our present and will inevitably influence the future of all nations. This transformation has become a continuous and persistent part of our lives. The foundation of this change lies in various economic and social factors such as the transition from an industrial society to an information society, rapid developments in information technology, changes in bureaucratic management models, increasing population, migration movements, search for quality of life, and efforts to improve efficiency. It is the primary responsibility of states to ensure public safety, prevent emergencies that may harm society, produce services that meet societal needs, and deliver essential public services swiftly and efficiently to citizens in life-threatening situations. Particularly, for the management of emergencies, all public resources and services are mobilized, and significant budgets are allocated to ensure success (Ekşi, 2016).

Looking at the fundamental definition of health, it was provided by the World Health Organization in 1948. According to this, health is not merely the absence of disease or disability but a state of complete physical, social, and mental well-being (Bölükbaşı, 2007). Health, in a negative sense, can be defined as “the absence of illness,” while, in a positive sense, it refers to the individual’s ability to participate in life, cope with stressful situations, their level of psychological well-being and physical harmony, and their ability to form good relationships with society (Çelikli, 2007). Physical health is defined as being inseparable from an individual’s psychological state and social environment (Özden, 2016). To assess changes in community health and health issues over time and to compare the health level of one society with another, basic health indicators are examined to evaluate the effectiveness of health services. In this regard, Turkey has, especially in recent years, developed a perspective that emphasizes quality and accreditation in the health sector. Concepts like patient rights and the right to choose a doctor, which put the patient in the forefront as the service recipient, have become important, and this health reform has been confirmed by various data.

The primary goal of public service delivery is undoubtedly to bring the beneficiary of the service together with public resources as soon as possible, without losing time, and to provide the necessary service promptly. Undoubtedly, one of these areas is Emergency Health Services. In emergency aid services, where societal needs operate 24 hours a day, seven days a week, it is essential to ensure that services are sustained continuously and systematically. Emergency Health Services (EHS) are a discipline that involves the rapid intervention and decision-making for urgent cases such as sudden illnesses, accidents, and injuries. These services are provided by a healthcare team specialized in the field and supported by medical equipment (Atilla, 2016). In other words, it is a vital public health service that helps individuals maintain their vital functions during transport in situations requiring urgent medical care and ensures their rapid access to emergency services (Şimşek et al., 2019).

Turkey is a country where emergencies, accidents, and injuries are frequently encountered, alongside extraordinary situations and disasters that occur intensely. For these reasons, the organizational structure and practices of emergency health services on a national level are of great importance (İnan et al., 2006). Pre-hospital emergency health services in Turkey first began in 1986 in Ankara, İzmir, and Istanbul under the name “077 Hızır Emergency Service” and could be reached by calling the number 077. In 1994, with a project initiated by the Ministry of Health, these services were developed under the name “112 Emergency Aid and Rescue Services,” accessed by the number

112. Problems encountered during any stage of delivering pre-hospital emergency health services negatively affect other stages, thereby reducing the efficiency of emergency medical services. Emergency health services begin with a call for emergency medical assistance made through the toll-free number “112.” The command and control center, which receives the call, quickly evaluates whether the request requires emergency health services based on the information gathered. In cases that do not require an emergency response, the service has the authority to refuse the request. The operation of emergency health services is as follows: in situations that require urgent attention, the command center assigns the nearest and most appropriate 112 emergency team to the request as quickly as possible. The 112 emergency teams reach the scene in the shortest time possible, provide emergency medical assistance, and conduct primary and secondary assessments of the case. If the patient requires advanced medical intervention, they are stabilized and then transported to the most suitable secondary or tertiary healthcare facility (Göcen & Ateş, 2013).

A significant issue is the use of these units, which are primarily intended to serve individuals in need of emergency health services, by patients who do not have urgent health problems, could be treated at the primary care level, or whose conditions could be postponed. The unnecessary use of emergency health services by individuals for non-emergency reasons is a global problem (Aktaş, 2009; Özyaral, 2005). The Emergency Health Services system is composed of a comprehensive network of personnel, equipment, and resources created to provide assistance and emergency medical care to society. These services also ensure that emergency medical care is provided swiftly, efficiently, and with high-quality assurance. The continuity of emergency aid services means that they are available 24/7 whenever needed. Emergency aid services are provided quickly and effectively to anyone in need, regardless of geographic or climatic conditions, at the beneficiary’s location. The provision of ambulance services and the usage rates of ambulances vary depending on local, socioeconomic, and cultural conditions in developed and developing countries. Worldwide, emergency ambulance services are provided on a provincial or regional scale, under the direction and management of command and control centers, 24 hours a day, without interruption (Kıdak, 2009).

When evaluating the criteria for the effectiveness of emergency aid services, they can be listed as primarily accessibility, early and rapid intervention, and accurate and timely diagnosis and treatment. In Turkey, in order to fulfill these objectives, emergency call services have been established in every province to ensure that the service is effective, fast, and manageable. These centers use a short and memorable emergency call number (112) so that citizens can quickly request emergency assistance and receive immediate responses to their requests. By unifying emergency call lines under a single number, the need for citizens and foreigners in Turkey to know multiple numbers for emergency calls has been eliminated.

- Cost savings and service efficiency have been achieved.
- Coordination and cooperation between relevant institutions have been established.
- All emergency calls have been recorded. By employing staff who speak foreign languages, it has become possible for foreigners to benefit from the service.
- Uniformity in practice has been ensured across provinces.
- The technical system used in call centers has been standardized and maintained at the same quality across all provinces.
- Through the geographical information systems used in call centers, it has become easier to locate the scene of an incident.
- Thanks to the vehicle tracking system, the dispatch and management of vehicles and teams have become more efficient.
- Since all data from call reception to team arrival at the scene is recorded in the system, it

is possible to statistically measure efficiency. International standards and developments have been tracked and integrated into our country's system.



112 Emergency Call Centers play a critical role in emergency situations by offering much-needed assistance, producing quick solutions to relevant problems, and determining which team is most suitable to respond. These centers ensure the flow of services through clear communication and by following specific steps. The first step begins with evaluating the incoming call within 30 seconds and dispatching the relevant team to the scene within 180 seconds. In the following steps, healthcare, security, and other teams focus on securing the scene and addressing the case. The most important aspect of the first step is the communication between the 112 Emergency Call Center personnel and the caller. It is vital to identify the problem quickly and provide an accurate address and case description. The fact that these services are provided to citizens within seconds is undoubtedly due to the clear and understandable communication established between personnel and citizens. In 2023, a total of 105,618,984 calls were made to 112 Emergency Call Centers, and 36,756,785 incidents were responded to. Coordination between institutions was ensured in 4,331,757 of these incidents. The 112 Emergency Call Centers handled 6,065 emergency calls from disabled citizens via the “Engelsiz 112” and “Engelsiz CİMER” applications. To assist foreigners living in Turkey, 106,059 emergency calls were answered in German, Arabic, English, and Russian. Additionally, 147,139 emergency calls were received from vehicles equipped with the E-Call system, which automatically contacts 112 Emergency Call Centers via sensors or manually through the emergency call button in case of traffic accidents. The 112 Emergency Call Centers provide uninterrupted emergency call and aid services 24/7 in 81 provinces, with 13,000 employees.

### **Accessible 112 Project**

The Engelsiz 112 application has been developed to enable disabled citizens to quickly connect with the relevant 112 unit during emergencies and to easily report the emergencies they experience or witness. Disabled citizens can use the mobile application, which they can download for free on their personal phones, to instantly notify the 112 Emergency Call Center. They can initiate a video call with the qualified 112 personnel or report their problems (such as health, safety, fire, etc.) via instant messaging through the application. If they wish, disabled citizens can also record their existing health problems in the app, and they can enter the contact information of their emergency contacts, allowing 112 personnel to see this information at the time of the emergency call. This will enable more efficient and faster service during the process. Location information can be used in emergencies to reach the user as quickly and effectively as possible. Access to the camera and microphone is necessary to communicate with the user.

### **When Should 112 Be Called?**

112 Emergency should be called in any situation that threatens health (chest pain, fainting, drowning, traffic accidents, poisoning, injuries, suspected fractures, etc.), any situation that threatens your safety (theft, assault, injury, smuggling, etc.), in the event of fires (house, vehicle, stubble, forest fires, etc.), or in extraordinary circumstances (earthquakes, floods, collapses, disappearances, etc.). The usage rate of ambulances varies based on factors such as age, the severity of trauma or illness, geographic factors, time of day, socioeconomic status, and insurance coverage. Today, the strength of public administrations is evaluated by their ability to reach individuals in need of urgent assistance in a timely manner. In recent years, motorcycle ambulances to overcome traffic congestion, snow-tracked ambulances for harsh winter conditions, and air ambulances such as planes and helicopters, as well as various vehicles of institutions working in a multidisciplinary manner in this field, have been frequently used to reduce response times. Fast and effective emergency services increase citizens' trust and loyalty to the state, while any negative developments in this regard lead to the questioning of public authority by citizens. If continuity in the effective and efficient delivery of services cannot be ensured, public order may be adversely affected, and social costs may arise (Özata et al., 2011).

The delivery of ambulance services and the rate of ambulance use in developed and developing countries vary based on local, socio-economic, and cultural conditions (Langhelle, 2004). In recent years, the demand for emergency ambulance services has been steadily increasing (Zenginol, 2011). The fact that the 112 emergency number can be called for free also leads to some abuses. Common situations include some malicious adults or children continuously calling the emergency center to occupy the lines, or phone repair technicians calling the emergency number to test phones without inserting a SIM card. Abuse cases like these can result in unnecessary calls, and for the 112 Emergency Number, the rate of such misuse can reach as high as 95%. This negatively affects the effective and efficient delivery of services. The unnecessary use of ambulance services is one of the major problems in today's modern healthcare systems. This situation increases the workload of emergency services and negatively impacts the economy of the country (Yaylacı et al., 2013).

Today, the misuse of emergency call services is considered one of the most significant issues in the delivery of emergency aid services. The misuse of emergency call services can be divided into two categories: unintentional, meaning unconscious, and intentional false calls. A large portion of misuse falls under the group of unintentional calls, where individuals who do not have the right to use the service for non-emergency situations still request help. These calls include requests for emergency aid for situations that do not actually meet the definition of an emergency, such as asking for assistance with an ongoing complaint of abdominal pain that has lasted for days. The use of these units, which are designed to serve individuals in need of emergency medical care, by patients whose condition is not urgent and could be treated at primary care or whose treatment could be delayed, is a significant issue. The unnecessary use of emergency medical services by individuals for non-emergency reasons is a global problem (Aktaş, 2009; Özyaral, 2005). A large portion of the calls made to the 112 Emergency Call Center are unnecessary, unfounded, frivolous, false, or made for the purposes of seeking information or consultation. Such calls cause public personnel, vehicles, and equipment to be needlessly occupied, prevent citizens with genuine emergencies from rapidly accessing the service, and delay timely intervention. It is observed that those who behave irresponsibly in this manner put public safety, public order, and public health at risk. During the provision of these services, the ease and free access to the service offers certain privileges to the service beneficiaries.

These privileges, in some cases, lead to the misuse of the emergency call line by the beneficiaries. This situation can lead to delays in providing services to those who genuinely need emergency assistance, thus unfairly victimizing these individuals. The potential for such unconscious misuse of emergency call services has recently emerged as a significant issue (Ekşi, 2016). False reports refer to calls where, upon the arrival of teams at the scene, it is determined that the report was not real.

Unnecessary calls are defined as those in which the call center is contacted without any actual report being made, with the intent to harass or verbally abuse the call-taker or dispatcher, play music, leave silent calls, or otherwise hinder the work of personnel, reduce work efficiency, and waste time and resources in the provision of emergency services. The fact that false reports and unnecessary calls occupy a large portion of the total calls, and that personnel are unnecessarily occupied, decreases the productivity of the staff answering such calls, wastes state resources, and causes delays in the ability of individuals in need of emergency assistance to reach the “112” service, resulting in both material and moral losses. To ensure that citizens with genuine emergencies and needs can benefit from the 112 Emergency Call Line in a timely manner, it is important to discourage those who occupy the lines with unfounded and false issues. Imposing legal sanctions on individuals who engage in these negative behaviors would serve as a deterrent. This is also important for the timely, effective, and efficient delivery of critical public services such as emergency health, safety, and fire response. In Turkey, according to Law No. 5326 on Misdemeanors, administrative fines are imposed by provincial governors on individuals who are found to have occupied the 112 Emergency Call Center with false reports. In the case of repeat offenses, the penalty is doubled.

## **CONCLUSION**

It is of great importance to raise awareness in society and explain the significance of systems established with the aim of benefiting people through proper education. Educating the public on when and under what circumstances to call the 112 Emergency line, as well as ensuring that the situation is described briefly and clearly with effective communication techniques, must be emphasized. The public should understand that the unnecessary use of the Emergency Call Center may delay the delivery of services to someone else, possibly even a family member, in the case of a real emergency. In Turkey, the country has been successful in various aspects such as the number of ambulances, response times, quick interventions by institutions, ensuring scene safety, and the coordinated efforts of institutions. However, the rate of unnecessary calls to the 112 Emergency line remains high. To prevent the potential social costs that could arise from the loss of the efficiency of this 24/7 service, as well as to prevent individual rights violations, technical, administrative, and punitive measures must be implemented to address unconscious misuse. Awareness-raising activities are crucial in making citizens understand the consequences of unnecessarily occupying the 112 Emergency Call Center, including the possible victimization of others.

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