

Policy Maker Recommendations



Table of Content



Introduction3

Recommendations5

 The Scene.....5

 Ambulances6

 Safety and Situational Awareness.....7

 Medical Treatment8

 Emergency Medical Communication Centre9

 In Hospital EMS10

 EMS Work Force and Training.....11

 Medical Equipment.....12

 Triage Systems.....13

 Other.....14

Join the EMS Network!15

Introduction

Fostering the response capacities and increasing the cooperation of the European Emergency Medical Services Systems (EMSS) is of decisive importance for strengthening the resilience of European societies in the light of multiple hazards, calling for close cooperation of public safety and health authorities on an international level.

iProcureSecurity responds to this challenge by identifying the major issues the diversity of the Emergency Medical Services (EMS) ecosystem poses to the capability of working together, stimulating R&I uptake with a focus on increasing harmonisation of operations across Europe, while delivering requirements for R&I activities to boost the development of more homogeneous EMS systems.

To enhance the response capabilities of the EMS organisations across Europe and facilitate a clear needs assessment of a major innovation procurement action, the project seeks to:



MOBILISE practitioners of emergency medical services, researchers and experts from the field to build synergies among existing actor constellations and initiate knowledge exchange.



ANALYSE the European medical emergency services ecosystem, its capability gaps, challenges, and needs, and monitor R&D initiatives to create a catalogue of innovative solutions.



ADDRESS legal issues, ethical and societal aspects that should be taken into account by the design, development, and deployment of new solutions in the emergency medical field.



PROVIDE specifications about common requirements and technical tender documents for the procurement of R&D, ready-to-use by the upcoming PCP action and external procurers.

This document provides an overview of recommendations for **POLICY MAKERS** against ten main areas of the EMS Ecosystem which were identified during the iProcureSecurity project. In the following each area is briefly described.





The Scene

The scene presents many challenges to emergency medical services to provide high quality medical care in emergency situations and it strongly differs from relatively controlled working environment of hospital emergency rooms. Accident environments can be dynamic, chaotic, unpredictable, uncontrolled, sometimes dangerous and there is a significant time pressure; so, it is difficult for EMS providers to oversee all aspects of the scene and make right decisions. In addition, the intervention of bystanders is essential as they are in many cases the first ones at the scene providing important information on the patient and the environment and can if properly trained can start first aid until EMS practitioners arrive.

Recommendations

- Mandatory installation of defibrillators as well as a First Aid box in all shopping areas and large department stores with appropriate marking of the area in which they are located.
- Establishment of harmonized bystander trainings for all educational levels in which EMS practitioners with different backgrounds can share their experience.
- Legally based measures to increase the efficiency of EMS including elevator size, stairwell size, other norms etc.
- Introduction of new policies for chronic disease management including the use of wearables and telemedicine to reduce the need of acute care.
- Keep the citizens informed on the implementation and advantages of new technology to make the process transparent and ensure its acceptance.
- Regulations and guidance for good legal and ethical practice in the adoption of new technologies for EMS systems (e.g. for data analytics, AI decision support, etc.).
- Strategic governance on procurement and implementation of new technologies to support alignment and interoperability with EMS systems.



An ambulance is a medically equipped vehicle which transports patients to treatment facilities, such as hospitals. In some instances, out-of-hospital medical care is provided to the patient during the transport. Ambulances can be categorized in three main areas which are ground, air and marine ambulances. Following three different types of divided road ambulances are used in prehospital care to different degrees in EU Member States.

Ambulance Type A: Patient transport ambulance. Ground ambulance which is designed and equipped for the transportation of the patients who are not expected to develop a critical condition.

Ambulance Type B: Emergency ambulance. Ground ambulance which designed and equipped for the transportation, basic treatment and monitoring of patients. (Basic life support ambulance).

Ambulance Type C: Mobile intensive care unit. Ground ambulance which is designed and equipped for the transportation, advanced treatment and monitoring of patients. (Advanced Life Support ambulance).

Recommendations

- Establishment of common legislation and documentation for the completion of medical and rescue operations by ambulance crews.
- EU wide standards for common colour coding and equipment in ambulances.
- Foster a similar design of ambulances in Europe to improve interoperability and communication.
- Make a uniform norm for availability of helicopters (HEMS) across Europe.
- Development and implementation of legal standards for ambulance safety covering various ambulance types.





Safety and Situational Awareness

Emergency response is dynamic by nature - in every step from taking the call to responding on the scene. Upon dispatch to an incident, responders immediately get in a search of their most valuable commodity: information. Initially, responders are provided with the key information from the person reporting the incident and upon arrival, they obtain more information about the surrounding situation at hand. While treating the patient, additional information about the situation becomes relevant. During these initial phases of information gathering, it is of utmost importance to ensure the EMS teams' safety and taking care of the patient. Situational awareness can be explained as that responders: **Understand their environment / Can determine what's happening around them / Are able to predict what can/could occur / Can respond to or withdraw from it.**

Recommendations

- Regulation and protection rules on personal data at national and European levels.
- Enable quick access to CCTVs in emergency situations for first responders to support a direct view on the scene, as well as a legal background for body worn cameras for all first responders.
- Legal and ethical standards for the use of data (e.g. data control and processing) by EMS professionals in emergency situations.
- Enforce implementation and usage of EU geolocation systems (Galileo) to enable independent and secure tracking of first responders to increase situational awareness.





Medical Treatment

Medical treatment means the management and care of a patient to combat disease or disorder. Before transporting the patient to the hospital, the diagnosis and medical treatment at the scene is one of the most relevant EMS tasks in the field. The European Resuscitation Council has identified five conditions in which EMS play a most crucial role. These are: cardiac arrest, severe respiratory difficulties, severe trauma, chest pain including acute coronary syndrome and stroke.

Recommendations

- Compulsory institutionalization of courses to deal with cardiac arrest and mass bleeding at all levels of education.
- Harmonisation and interoperability of digital networks for patient data exchange complying with the GDPR and additional data protection regulations on national levels.
- Introduce a unique Pan-European Mobile Emergency application.
- Implementation of regulations aiming at the support of harmonisation and interoperability of devices and infrastructure (e.g. wireless broadband networks) in the EMS setting.
- Develop a European legislation against litigation for by-standers who use AED in emergencies or who apply first aid. These „Good Samaritan Laws“ could encourage bystanders to assist injured people without any concern about future legal consequences.
- Establish standards for EMS interventions for neonatal and paediatric victims.





Emergency Medical Communication Centre

Dedicated facility to answer emergency calls immediately, to identify callers' needs and to dispatch the necessary resources wherever and whenever an emergency need occurs. Incoming calls can use audio, video or text messages. The first aid instructions must be given from the EMCC. The appropriate ambulance type with right equipment must be dispatched to the scene. The data from patients, professionals and personnel are to be sent to the relevant experts and health institutions. All data must be recorded. There are regional and city-level EMCC that cover the necessary personnel, infrastructure and technology. There is no Europe wide harmonization for EMCCs. EMCCs can be differently handled even within one country. The needs are different for islands, main lands, rural and urban areas.

Recommendations

- Legislation for use of environmental data (e.g. traffic cameras) in line with GDPR.
- Implementation of legislation allowing the interconnectedness of the different information systems and their access to patients' medical records.
- Ensuring active advocacy for but also (tighter) controls of the fulfilling of data protection in regard of cyber security for/of EMS providers.
- Requirements and agreements (e.g. with internet map providers) to ensure up to date cartography systems (mapping) for EMS operations.





In Hospital EMS

In Hospital EMS refers to all subsets of medical institutions and hospitals that have the capacity to deliver uninterrupted emergency care 24/7. Emergency Department demands continue to rise in almost all high-income countries, including those with universal coverage and a strong primary treatment network. Many of these countries have been experimenting with innovative methods to reduce the demand of acute care, while at the same time providing highly needed services that can prevent emergency department attendance and later hospital admissions. A large proportion of patients in emergency departments have minor illnesses that could potentially be handled by a health care provider in a primary care setting. The increasing number of visits to emergency departments causes not only delays in urgent care provision but it also increases the overall costs.

Recommendations

- Support the implementation of centralized platforms where EMS professionals, Emergency Medical Communication Centers (EMCC) and Emergency Departments (ED) can share specific information such as number of available beds, specialist physicians, technical specifications, ambulance location and updated patient condition.
- Designate referral centers for angioplasty and target temperature management (Cardiac arrest centers).
- Support the introduction of shared EHR available for EMS professionals, EMCC and hospitals.
- Regulatory framework to support legal and ethical guidance on use of advanced communication technologies and data transfer for controllers and processors.
- Service Level Agreements and supply arrangements between public and private health systems (e.g. in surge events, pandemics, etc.).





EMS Work Force and Training

Emergency medical services (EMS) vary across Europe, with two predominant models: the Anglo-American model which uses mainly paramedics in a prehospital setting, where 'the patient goes to the doctor'; and the Franco-German model which uses mainly physicians in a prehospital setting, where 'the doctor goes to the patient'. No perfect model exists, and each country has an EMS model based upon the needs of the community and the available economic resources. The number, the types and the level of training of ambulance personnel and teams are not harmonized in European countries.

Recommendations

- Flexibility in the number of EMS professionals: Part-time/Semi-professional/Voluntary staff, Non-specialized staff with single competencies (Single-competency team with periodic training).
- Certification and control of private ambulances.
- Revision of CPR training methods and standardization for all ages.
- Practical, evidence-based training with feedback available on site.
- Standardized training path for each type of EMS practitioners including trainers based on common terminology and adjusted to the different EU languages.
- Provide regional/national EMS Training and Simulation Centres with high technology training tools (Augmented Reality, Mannequins...).
- Fostering the technological development for trainings in each country.
- Establish common national and EU competence profiles and qualification standards.
- Establish common competence standards for EMS instructors.





Recommendations

- Facilitate adequate maintenance, restock and supply of EMS practitioner's equipment.
- Foster international harmonization of medical equipment especially by using technological innovations.
- Ongoing development of regulation of standards for EMS medical equipment innovations.
- Set steps for an international exchange and contribution of equipment for more social equality.

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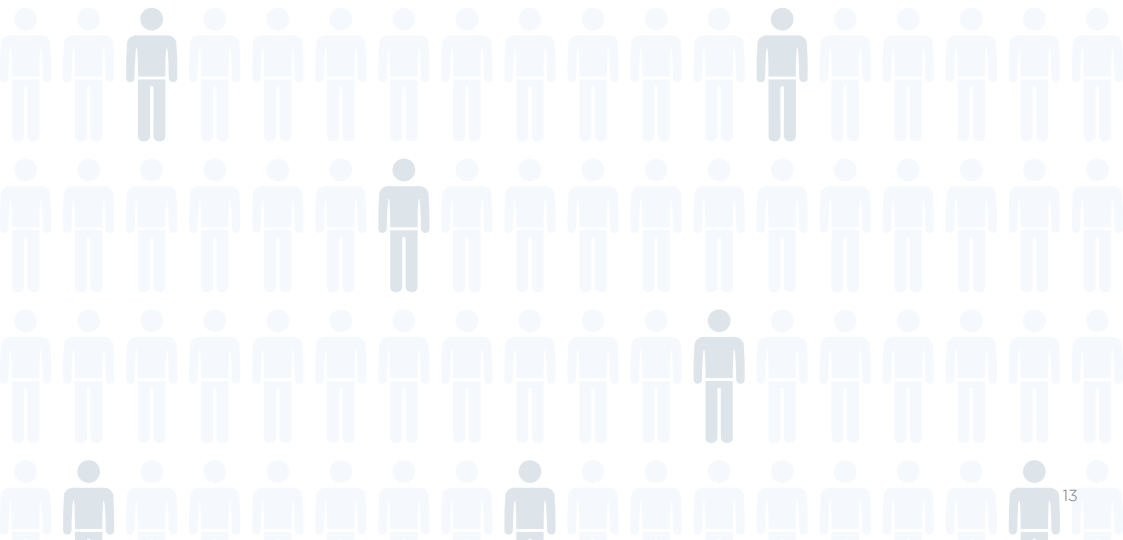


Triage Systems

Triage can be defined as “the sorting of patients into priority groups according to their needs and the available resources”. It must ensure the efficient use of available resources e.g. personnel, supplies, equipment, means of transportation and medical facilities.

Recommendations

- Strong bilateral agreements between the European countries for quick actions in emergency situations (e.g. Barent Rescue) that is underpinned by EU legislation (e.g. Lisbon Treaty).
- Implementation of policies that regulate the health provider structure and that promote rapid-responding structures (ER/ICU) vs. “single disease/single task” structures.
- Campaigns of awareness raising amongst population for early recognition of key signs of risks.
- Legislative framework to support the change or standardization of triage through a transformation period and regular exchange.



••• Other

This area subsumes all additional aspects which are horizontally relevant for all areas of the emergency medical service ecosystem including financial, legal, political and administrative issues.

Recommendations

- Increase the financing of pre-hospital EMS.
- Support the process of procurement of new technologies and the provision of clear vision for their implementation in the EMS systems within the next 15 years.
- Ensure flexibility in logistics and structures of EMS allowing for the rapid deployment of infection control.
- Define IPS subset more adequate to neo-natal and paediatric victims.
- Establish standards for EMS interventions for neo-natal and paediatric victims.
- Set the focus on logistics as well as on prevention during medical crisis (e.g. pandemics).
- Define cross-border collaboration protocols supported by EU regulations (e.g. Lisbon Treaty)
- Agree on a pan-European electronic health record that ensures legal and ethically sound data controls and processing underpinned by GDPR
- Establish regulation, standards and dedicated resources (financial, organisational, human and technical) for EMS capabilities in EU wide emergency events (e.g. pandemic) that enable a more rapid and comparable response, mitigations and recovery from significant disruptions.





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