Needs Assessment for the Establishment and Functioning of Emergency Medical Teams (EMT) in Armenia

Final Report

September 2021

Contents

Abbreviations

ASB	Arbeiter-Samariter-Bund
EVD	Ebola Virus Disease
ECHO	European Civil Protection and Humanitarian Aid Operations
EMT	Emergency Medical Team
EMT CC	EMT Coordination Cell
EOC	Emergency Operation Center
EU	European Union
IDP	Internally Displaced Persons
I-EMT	International EMT
KI	Key Informant
KII	Key Informant Interview
LoC	Line of Contact
MDS	Minimum Data Set
MoES	Ministry of Emergency Situations
MoD	Ministry of Defense
MoH	Ministry of Health
NATHAN	Natural Hazards Assessment Network
NGO	Non-governmental organization
RKI	Robert Koch Institute
SOD	Sudden Onset Disaster
SOP	Standard Operation Procedure
UN	United Nations
UNEP	United Nations Environment Program
US	United States
WHO	World Health Organization

Background

Arbeiter-Samariter-Bund (ASB) is one of the biggest and oldest German aid and welfare organizations with more than one million members. Since its founding in 1888, ASB has acted as a politically and denominationally independent association. With its first international mission in 1921, the area of foreign aid became an integral part of the organization. Currently ASB has 11 foreign offices and implements programs in more than 20 countries. ASB, through its officially registered country office in Georgia implemented several EU, German and US government funded projects related to: inclusive disaster risk reduction, providing social services, improving economic conditions, re-socializing former prisoners, confidence building, as well as humanitarian assistance to Internally Displaced People (IDPs), conflict affected population and other vulnerable groups. Since February 1, 2021 ASB has begun implementing the project ***"Stronger together – cooperative action to respond to cross-border emergencies"*** funded by Directorate-General for European Civil Protection and Humanitarian Aid Operations (ECHO). Overall, the objective of the action is to enhance the disaster risk management system with a special focus on health emergencies in Georgia through capacity building and establishing cross border cooperation mechanisms. The duration of the project is 24 months (February 2021 - January 2023).

Goal of the study

The needs assessment will be conducted in order to comprehensively analyze how Emergency Medical Teams (EMT) can function in Armenia. This assessment was undertaken in accordance with WHO certification standards for EMTs. More specifically the assessment evaluated:

- Existing human, infrastructural and legal resources;
- The gaps and/or bottlenecks related to infrastructural arrangements, standard operating procedures and existing HR procedures for EMTs;
- What is needed to establish effectively functioning EMTs with the aim of providing an elaborate plan of how to do so.

Based on the findings of this study, the Arbeiter-Samariter-Bund's Armenia office will provide EMT`s Standard Operational Procedures (SOPs), an Action Plan and corresponding guidelines.

Study Design and Methodology

In order to achieve the above mentioned goal and objectives, the needs assessment methodology deployed a mix of research methods and analytical approaches to account for the complexity of the research subject. The Needs Assessment was carried out in three phases:

a) Desk phase
b) Field phase
c) Synthesis phase.

Desk phase

The first stage of study was the Desk Phase which was key to getting a better understanding of internationally recognized certification standards, regulations, and procedures around EMT. The Desk Phase provided solid ground for the later stages of the study particularly in identifying key stakeholders interviewed during the Field Phase, the development of a comprehensive list of survey questions for the Key Informant Interviews (KII), as well as informing the study design, the content and the structure of the KIIs guide. During the Desk Phase, the research team thoroughly evaluated and analyzed documents supplied by the ASB's Georgia office. Annex 1 provides a comprehensive list of literature studied during the desk study.

Field Phase

The second phase of study was the field phase that covered qualitative research using KIIs. During the field phase, a comprehensive list of Key Informants (KIs) as well as the KII guide was elaborated in close cooperation with client and informed by the results obtained during the Desk Phase preceding the Field Phase of the Needs Assessment.

Survey instrument

During the second phase of study, the draft version of the qualitative survey questionnaire was elaborated and sent to the Client for comments and review. The final version of KII guide was elaborated in close cooperation with ASB. The utilization of KIIs guides for the fieldwork was carried out after the final review and confirmation from the client. The survey questionnaire itself was very comprehensive aiming to provide information about every aspect of EMT operation. It contained open-ended questions with pre-elaborated probes and covered several themes including:

- EMT workforce;
- SOPs;
- Logistical support and security procedures;
- Equipment and consumables;
- Physical accessibility of field hospitals and space requirements;
- Patient management;
- Information gathering and management;
- Emergency response research;
- Policy implications.

The qualitative survey questionnaire utilized for this particular study is given in Annex 2, while Annex 3 provides information about the interviewed KIs. During the field phase, several versions of survey questionnaires were prepared including questions for different stakeholders. Annex 2 contains two major versions of KII guide. The first one was elaborated for representative of focal point Armenia who was perceived to be the most informed KI knowing both the national and international context; the second KII guide was elaborated for other KIs and stakeholders.

The Field Phase in Georgia covered 9 interviews in sum and the average duration of each interview was 75 minutes. Interviews have been audio-recorded following the informed consent of respondents

and thematic write-ups have been elaborated based on them. The first interview was carried out with focal point Armenia to provide in-depth insight about the process. Following the first interviews, a small debriefing session was organized with project team, reviewing the instruments and sharing the lessons from the process.

Synthesis

The last stage of study was the Synthesis phase which incorporates and triangulates the information obtained through the desk study and KIIs, formulates the main findings about EMTs and elaborates the recommendations on how to tackle potential difficulties or gaps in the process.

This mechanism not only facilitated validation of obtained data through cross verification from various sources but also had an added value for the in-depth interpretation of the results.

Study limitations

In the framework of this study, the project team attempted to carry out interviews with all stakeholders from the Armenian ministries. The planned interviews were completed with all KIs except one; the head of legal service of MoH refused to participate in the study and cancelled the planned interview for unclear reasons. Because of that condition, the analysis of the legislative framework has limitations; it is mostly based on the desk study findings and the general information provided by KIs.

Executive summary

The needs assessment for the establishment and proper functioning of Emergency Medical Teams (EMT) in Georgia and Armenia was carried out within the framework of the project "Stronger together – cooperative action to respond to cross-border emergencies" implemented by Arbeiter-Samariter-Bund's (ASB) Georgia office and funded by the Directorate-General for European Civil Protection and Humanitarian Aid Operations (ECHO) with the aim of improving the disaster risk management system, as well as placing a special focus on health emergencies in the country. The study aimed to evaluate existing needs around EMT and its function in Armenia. For this goal, the following tasks have been identified: (1) assessment of existing human, infrastructural, legal resources; (2) revealing gaps and/or bottlenecks related to infrastructural arrangements, standard operating procedures and existing HR procedures for EMTs; (3) elaboration of recommendations for establishment and effective functioning of EMTs. The study was carried out with the combination of qualitative (in-depth interviews) and desk study methods.

EMT initiative

Following the responses to Sudden Onset Disasters (SODs), it was observed that the deployed medical teams had different medical and technical capabilities which had the potential to influence the delivery of care on the ground. Therefore, WHO started standardizing emergency medical teams, which provided a humanitarian concept to the international community and helped countries enforce and improve their mechanisms of disaster risk management and coordination. The first classification system was published in 2013 and it was revised in 2021. According to the new system, EMTs deploying internationally need to go through the classification process in every 5 years. The 2021 Blue Book provides 3 types of emergency medical teams: EMT type 1 (mobile or fixed) provides outpatient emergency care, EMT type 2 provides inpatient emergency care, EMT Type 3 provides inpatient referral care and additional specialized team providing experts without heavy equipment. According to country specific capacity and context, Armenia plans to create EMT type 1 mobile.

Armenia - country in context

The qualitative and desk study findings suggest that Armenia is strongly prone to natural disasters, catastrophes and various other kinds of hazards. The desk study findings suggest that of these disasters, Armenia is the most susceptible to earthquakes. 100% of its territory is prone to it. In addition, 98% of Armenian territory is at risk of drought and 31% of its territory is prone to flooding. One of the latest destructive earthquakes occurred in Spitak (M=7.0) resulting in a high death toll and strong economic damage; 25 000 people died as a result of the earthquake and its economic impact on the region was evident and visible for a long time. Regarding the natural catastrophes, the qualitative study participants have reported that there are a limited number of medical facilities in mountainous areas and this is why the regions are so vulnerable to SODs and health emergencies.

Besides the SODs, Armenia has a "frozen" conflict with Azerbaijan over Nagorno-Karabakh which escalates from time-to-time. The last escalation has happened in 2020, which resulted in two serious

emergencies; Armenia had military confrontations close to the Line of Contact (LoC) and the country was facing the COVID-19 pandemic too. The double emergencies overloaded the health sector, country could not handle the increased number of patients and asked for assistance from foreign EMTs. Last years' experience, unresolved conflict and the prospect of future confrontations are key indicators illustrating the need for EMTs.

It is worth noting that Armenia also has the Medzamor nuclear power station which is frequently mentioned as one of the hazards facing Armenia. The power station is expired and needs safe decommissioning though it still operates. Any accident at Medzamor has potential to impact not only Armenia but all of the countries in the region.

EMT workforce

The qualitative study findings suggest that EMT will be created under Emergency Situations and Mobilization Preparation Division of the Ministry of Health (MoH) of Armenia. The KIIs illustrate that Armenian stakeholders do not have a clear vision about the size of the team, however they are aware what kind of specialists are needed for EMT. According to the respondents, EMT Armenia will need medical, technical and logistical staff, a team leader, deputy team leaders, and a psychologist. In terms of mobilization of the EMT medical workforce, a focal point of Armenia suggests selecting medical specialists from functioning agencies with experience to respond to different emergencies. Namely, sources of the EMT medical force are assumed to be:

- Small medical teams gathered on the ground of outpatient hospitals under the Civil Security Service;
- Medical brigades of Ministry of Emergency Situations (MoES);
- Former military doctors from the Ministry of Defense (MoD) working as civilian doctors.

Besides the medical staff, EMT will require technical and logistical specialists. The findings suggest that Armenia finds it challenging to select the right specialists as the field requires a mixture of various skills. It is recommended to apply the Estonian model of logistical staff recruitment and mobilize them from other agencies (e.g. MoES). It is also recommended to attach all infrastructure-related functions (setting up tents, electricity, WASH, technical-logistical support at base camp) to logistical specialists and make good investments in their preparation. According to KIIs, Armenia has selected a technical specialist for mechanical transportation, as the team itself will be mobile. It is recommended to have a roster of five specialists per technical position in order to ensure their availability during SOD. Besides, the team will need the driver for relocation in SOD area and a psychologist.

International experience shows that the roster of volunteers is applied for the management of EMT human resources. The qualitative study findings illustrated some advantages of the volunteer roster; namely, they allow for the timely mobilization and rotation of personnel in case the deployment lasts more than two weeks. According to KIIs, maintaining a roster of volunteers is very challenging and requires an incredible amount of effort. Qualitative study findings suggest that EMT participation is often not remunerated and depends on volunteering. Similar to most of the countries engaged in this initiative, Armenia aims to create a volunteer-based team. The focal point of Armenia assumes that it will initially be difficult to attract the right professionals in such a system because the initiative will be a novelty for Armenians; however, KIs believed that strategic communication, a good public image and an initial successful mission are key to overcoming this obstacle. The international practice of roster

management shows that countries put a strong emphasis on transparency, consistent communication and inclusion; it is therefore recommended to organize additional trainings and meetings that are interesting for members and develop a bottom-up system where EMT will react to and engage with the ideas of members. In addition, EMT membership requires formal recognition. Based on international practices, it is recommended that EMT members and their employers sign memorandums which will contain records about their commitment and the benefits of their participation.

WHO standards urge countries to provide effective preparatory training and retraining for their EMT members. According to the qualitative study findings, training of EMT members will be carried out under the training center of MoES and/or MoD. The experiences of other countries show that training modules are developed around various themes. Countries usually put a strong emphasis on induction trainings which inform volunteers about the humanitarian aid initiative and system. Usually, induction training is an instrument used to decide whether the volunteer is suitable for the system, however ultimately EMT coordinators make decisions on which volunteers will be deployed. International practice shows that EMT training curriculums need to be constantly reviewed and should always reflect new scientific, technological experiences and lessons learnt from previous activities. In terms of capacity building, qualitative study participants have mentioned that international simulation exercises and twinning partnerships provided by the German Robert Koch Institute (RKI) are very important tools in increasing team capacities overall.

Legislative framework

In the framework of the qualitative and desk studies, Armenia's legislative framework was reviewed and evaluated in relation to the establishment and functioning of EMT. According to the major findings, the Armenian system does not have legislative obstacles for EMT establishment and further legislative amendments should be carried out in three main directions; first of all, the qualitative study findings suggest that the Government of Armenia and/or the MoH should issue an order or new law that establishes and gives normative recognition to EMT. Second, it is important to review the legislative base for smooth interagency coordination. Qualitative study findings suggest that the operation of EMT will be carried out via the engagement of three agencies (MoH, MoD and MoES), where the MoH has a leading role. It is important to review the normative framework in order to avoid the function overlap and define the responsibilities between agencies so that they will be complementary to each other. Third, it is important to review the laws and decrees used for the emergency and health emergency responses. The establishment of EMT opens the window of opportunity to upgrade the existing system, which should not be missed. Based on the desk study findings, it is recommended to review and issue amendments in *the Law of Republic of Armenia about Legal Regime of Emergency State, Law of Republic of Armenia on Civil Defense, Law of the Republic of Armenia on Population Protection in Emergency Situations, Law of the Republic of Armenia on the Rescue Forces and the Status of the Rescuer, and Law of the Republic of Armenia on the Rescue Service of Armenia*.

EMT activation

The study findings demonstrate the importance of developing an activation plan and procedures as well as allocating individuals who are responsible for making decisions regarding the established EMT. The qualitative study findings suggest that there is no final decision or agreements about the allocation of

individuals responsible for the national or international activation of EMT. However, national focal point of Armenia has assumptions who could be that individuals and what kind of decision-making is required for each type of activation. The decision about the national activation of EMT can be made by the Minister of Health of Armenia. For national activation, it is important that current response plans include records about which level of emergency and indicators require activation of EMT. In contrast, decisions about international deployment can be made at a much higher level as it is not only a strategic and political decision, but activating a medical response on international level requires a large amount of resources. According to the qualitative findings, the decisions about international engagement can be made at least at the level of Deputy Prime Minister.

In this case, Armenia aims to request assistance by asking for the activation of foreign EMTs. Country can directly approach partners, process the request via a virtual authority platform or through international organizations like WHO, EU, UN, etc. The request for assistance should include information about the field of expertise needed under EMT; before the departure, activated and mobilized EMT needs a final approval from the affected country to enter the state.

EMT mobilization

The system of EMT requires teams on a stand-by regime. Moreover, national deployment envisages the maintenance of a well-managed roster of volunteers and a warehouse; while international deployments require more preparation compared to national deployments, they also have increased bureaucratic challenges; namely, teams may face visa issues, difficulties with obtaining temporary medical licenses and issues with customs. According to the respondents, government-based EMTs face less bureaucratic challenges than Non-Governmental Organization-based (NGO) EMTs as they can receive immediate support from ministries and embassies. In order to avoid visa issues, it is recommended to periodically communicate with volunteers to ensure they have valid passports. In terms of temporary medical license and customs, it was reported that the preliminary evaluation of regulations in countries is very important. Some countries do not require temporary medical licensing from internationally classified EMTs, while others do have such demands. Usually medical licenses are also part of overall acceptance and in the event that it will be a requirement, MoH can provide an official letter that doctors are working specialists, focal points can share the list of specialists to the country and temporary licenses can be issued on site and/or the doctors can have copies of their medical sciences translated into English which can be prepared by MoH in advance.

With regard to customs, it is recommended to get to know the customs regulations of requesting countries, particularly, about prohibited medications, correctly separating dangerous and non-dangerous goods, and including a list of equipment that should fit within the logistics handed to customs. In the event that the customs clearance takes a longer amount of time than originally expected, the EMT Coordination Cell (EMT CC) created in affected country following SOD can provide support to facilitate the process. Besides bureaucracy, the experiences of other countries illustrated that successful mobilization depends upon a clear activation system. During preparatory trainings, volunteers need to be informed that statements of availability should express not only their personal will but should also imply that there is support from employers, personal needs are taken into considerations and they are available for two weeks.

EMT coordination

According to both the qualitative and desk findings, EMT operation requires a strong coordination mechanism which might be different for national and international responses. International deployments require the permanent involvement of the Ministry of Foreign Affairs and Armenian embassies abroad, while national responses require inter-agency coordination including MoES, MoD and MoH. During the emergency crisis, EMT CC will be temporarily created under the MoH. The qualitative study findings suggest that establishment of EMT CC requires the experts with special trainings who are usually mobilized via international invitations. Usually international cooperation mechanisms are utilized to invite EMT CC expert and engage in coordination of emergency response. Qualitative and desk study findings suggest that EMT CC is instrumental to coordinate the response and liaison EMT with local organizations and international coordination groups with capacity to increase the efficiency of response. The desk study findings illustrated that EMT CC can receive the support from Public Health EOC Network (EOC-NET) acting under the WHO. EOC-NET works on the capacity building of national EOCs and helps countries in management of response upon the acceptance or request of government of affected country. The qualitative study findings generally suggest that international organizations can play a crucial role in mobilization of foreign EMTs; they can fund the deployments, facilitate the exchange of information between affected country and EMTs responding to the request, provide the humanitarian assistance in order to reinforce the performance of teams deployed on the ground.

The study findings suggest that EMT CC will be the main structure coordinating the EMT operations during the crisis including tasking, information gathering, monitoring and reporting, and planning the following steps. It can also coordinate the support provided by international organizations to the teams and it is intermediary between organizations and teams. For monitoring and reporting, WHO provides guidance about general evaluations of provided medical care in order to avoid harsh deviations. However, standards do not include information about the quality of evaluations and monitoring; such guidelines do not exist. The only established requirement for monitoring is the MDS system which provides general information about EMT performance and field visits to renew information about SOPs or protocols, as well as confirm or support EMT operations.

Infrastructure

Well-managed infrastructure is a crucial part of EMT operations. According to WHO standards, logistics cover 13 major areas which are essential for the effective functioning of EMTs. The qualitative study participants have mentioned that the procurement of logistics need to be carried out carefully. Even though the team is mobile, all of the 13 areas need to be considered in EMT logistical Standard Operation Procedures (SOPs); however, the content of SOP will be determined by the decisions and approaches the country will have towards each component. The qualitative study findings suggest that mobile EMT will have base location where the tents will be setup and team members will be accommodated. The selection of location for the deployment is under the responsibility of affected country. It is compulsory for the internationally classified team to be self-sustainable at the base camps for two weeks. Compared to the fixed team, EMT type 1 mobile carries out field visits and requires the means of transportation for that.

The study findings illustrate that the core part of EMT are the SOPs. According to qualitative study findings, Emergency Situations and Mobilization Preparation Division will be responsible for the elaboration and adoption of SOPs in close consultations with ASB and experts hired within this project.

It is noteworthy that international experience shows that the engagement of an expert board and multidisciplinary approach might be beneficial for elaborating SOPs. In order to create a solid system of SOPs, it is important to organize them structurally. SOPs need to be classified, numbered and organized. In terms of content, study participants mentioned SOPs need to be short, precise, not very fixed and should provide guidance to every procedural question. The respondents mentioned that SOPs are living documents and they need to be reviewed at least once per year. Corresponding studies provide the recommended list of SOPs for the EMT type 1 mobile.

Policy implications

The qualitative study findings suggest that Armenia has strengths and weaknesses in the area of policy. The findings illustrate that the country has done some preparatory work though some bottlenecks are visible that need immediate attention. The biggest bottleneck of the process is the lack of strong leadership from the MoH of Armenia and unstable political will. According to Armenian KIs, there is political will in Armenia to create EMT though it is not clear how long it will last and if it will be enough. The next bottleneck of EMT establishment and functioning in Armenia is funding uncertainty. Due to the fact that the country has recently experienced war with Azerbaijan and is still tackling the pandemic, it is difficult to determine what Armenia's economy will be like in two or three years. In addition, the qualitative study participants reported that Armenia has low health financing and it is likely that EMT will suffer from underfunding.

The qualitative study findings show that Armenia might face a function overlap between agencies. KIs reported that medical brigades/teams are also presented under the MoES; hence, it is important to create a genuine normative base so that these two systems (MoES and MoH) will be complementary to each other. At the end, it is important to determine the geographic scope of activities to identify the timeframe of mobilization and the type of logistics needed to operate in the particular regions.

Study findings

The corresponding chapters introduced the study findings around the needs of the establishment of functioning EMTs in Armenia. The qualitative and desk study findings are organized around sub-chapter themes covering different aspects of the EMT initiative; the findings provide a brief review of the EMT initiative and its importance nationally and internationally. The plan is to establish an EMT type 1 mobile in Armenia, present these findings in the country specific context, as well as the risk associated with SODs and health emergencies. The qualitative and desk study findings in-detail discuss the needs of the EMT workforce, legislative framework, activation procedures, mobilization of teams and coordination of national or deployed international teams, information gathering, monitoring and reporting, infrastructure and logistical support, standard operation procedures and policy implications. The introduced findings are comprehensive and allows for an evaluation of the current state of development – including what has been done so far and what needs to be done.

The presented study findings are likely of interest for all the stakeholders engaged in the process and can be used for EMT advocacy.

EMT Initiative

EMTs have a long history of formation and standardization which is strongly related to the previous experiences gained during Sudden Onset Disasters (SODs). Following the responses to 2010 Haiti earthquake, 2004 Indian Ocean Tsunami and 2010 floods in Pakistan, it was observed that the foreign medical teams deployed following SODs were using different names, terms and their operational or technical capabilities were very diverse which might have influenced the care they provided and their coordination pattern. Hence, WHO have started considering the classification and standardization of emergency medical teams, so that they can speak the "same language", abide by internationally recognized standards, clarify the capabilities and capacities each team had and improve overall coordination. The previous experiences of responding SODs led to the establishment of the Emergency Medical Teams Initiative and classification system, which became operational in 2013 and was renewed in 2021. It's worth noting that medical aid and EMT are the only form of humanitarian aid that is classified and standardized due to its impact on the health and well-being of the general population. According to the new classification system the purpose of EMT governance initiative is to:

1. Establish a vision, mission, key objectives and goals;
2. Articulate and coordinate the engagement of stakeholders at different levels in order to ensure meaningful participation and contribution
3. Establish management practices to support the achievement of objectives and evaluate the performance of teams.[1]

In order to achieve common standards between all EMTs globally, WHO introduces an accreditation procedure to enable teams to meet minimum technical requirements and standards. Noteworthy is that classification is necessary for the teams that are deploying internationally yet not necessary for the local EMTs. The accreditation pathway ensures that EMTs are able to be deployed internationally and

[1] WHO. CLASSIFICATION AND MINIMUM STANDARDS FOR EMERGENCY MEDICAL TEAMS. 2021 https://extranet.who.int/emt/guidelines-and-publications

provide sufficient care to affected communities. Accreditation contains the following steps: (1) expression of interest, (2) self-assessment; (3) mentor assignment; (4) mentorship process; (5) pre-verification visit; (6) verification visit; and (7) international registration. Following the successful completion of process and procedures, the EMT will receive accreditation which will be reevaluated after 5 years. The entire accreditation process requires EMT capacity strengthening which includes the enforcement of a legislative framework to ensure the smooth operation and coordination of EMTs, the adoption of WHO standards, identification of national focal point(s), elaboration of SOPs and the establishment of clear reporting and accountability procedures. The assessment of capacities stands on the principle of the four Ss: Systems (SOPs, protocols), Staff (capacity, sufficiency and training), Supplies (and equipment), and Structure and space. A comprehensive understanding of those four principles allow for EMT readiness to be activated at any time.[2]

According to WHO standards, EMTs are divided into different typologies; each type of EMT have particular capabilities which are essential to provide the care escribed to them. According to the 2021 classification and minimum standards, the EMTs are divided into the following typologies:

- EMT Type 1: Outpatient Emergency Care: Provides outpatient initial emergency care of injuries and other significant health care needs.
    - EMT Type 1 teams fall into two categories: associated with healthcare facility (fixed) or not associated (mobile).
- EMT Type 2: Inpatient Surgical Emergency Care: providing inpatient acute care, general and obstetric emergency surgery for trauma and other major conditions.
- EMT Type 3: Inpatient Referral Care: Complex inpatient referral and surgical care including intensive care capacity.
- Additional specialized care teams such as: rehabilitation, burn injuries, and renal dialysis, specialist disease management teams (like cholera or Ebola Virus Disease (EVD)).

The qualitative study participants have mentioned that Armenia plans to create EMT type 1 mobile. According to the Armenian KIs, mobile teams have some advantages which influenced their choice in this regard. Namely, one of the respondents mentioned that a mobile team ensures better psycho-emotional stability of affected individuals*, "when medical aid is provided close to their home, relatives, and people are emotionally stronger and it influences the speed of their recovery".* Armenia plans to have an internationally accredited team with the capacity to deploy abroad.

> *"We are thinking so [to create mobile team] because having fixed [team] will hinder to move the team from one place to another".*
>
> *Local stakeholder, KII*

According to WHO, EMT type 1 mobile has 27 key standards for clinical care, which provides information on what kind of service this type of team should provide. Annex 4 provides comprehensive information about the standards of clinical care for EMT type 1 mobile. Due to the fact that Armenia

[2] WHO. CLASSIFICATION AND MINIMUM STANDARDS FOR EMERGENCY MEDICAL TEAMS. 2021 https://extranet.who.int/emt/guidelines-and-publications

is focused on type 1 typology, analytical framework of the report is narrowed down to type 1 mobile and needs identified in the document are customized to it.

The importance of EMT initiative

The qualitative study participants have discussed the importance of the EMT initiative and its impact on the countries in question and their populations. All interviewed KIs have mentioned that the initiative is very important as it provides an efficient tool to respond to national or international health emergencies. The findings of qualitative study about the importance of EMT was divided into two parts; one part of the findings refer to international importance; another part of findings refer to national and country-specific benefits.

The group of KIs have mentioned that the EMT initiative represents a **very humanitarian concept** towards the international community. It provides a network of systems which are based on the principle of solidarity and ensures that states receive medical support and help when they have disasters and health emergencies.

The qualitative study participants reported that the **EMT initiative provides positive learning opportunities for the organizations, countries and individuals engaged in this process**. From the perspective of organizations and countries, the establishment of this system further professionalizes the management, structure and coordination mechanism particularly in terms of health emergencies.

> *"When you go through the [WHO] standards and whole process, you think about how you can manage your pool, staff, logistics, warehouse… how do we respond, how the process is activated, where the team will be positioned in the national system… This leads to the professionalization of management and structure that is good for the organization and national response too… have heard from the organizations engaged in deployment that they have learned a lot as an organization and they put this into the development of national responses".*
>
> *International respondent, KII*

Armenia – country in context

In the framework of this study, one of the aims was analysis of the Armenian context in terms of susceptibility towards natural disasters and various hazards. The findings suggest that the country is exposed to various kinds of hazards and emergencies including natural disasters and catastrophes, military hostilities close to Karabakh, and radiation related risks.

Like elsewhere in the Caucasus, Armenia is situated in a seismically active zone: the Alpine-Himalayan seismic belt. According to the desk study findings, country has a very complex geography and its territory is formed with steep mountains in strongly detached altitudes (the altitude difference is about 3 500 meters).[3] According World Bank Global Risk report (2021)[4], Armenia is among the top 60 countries exposed to several hazards and 80% of its population are at risk of being affected by various

[3] https://www.preventionweb.net/files/workspace/30411_attachment3llrmmanual.pdf

[4] https://documents1.worldbank.org/curated/en/621711468175150317/pdf/344230PAPER0Na101official0use0only1.pdf

natural catastrophes and other hazards.[5] The Natural Hazards Assessment Network (NATHAN) studies suggest that Armenia is prone to earthquakes, landslides and mudflows, floods, fail and drought. The findings suggest that 100% of Armenian territory is prone to **earthquakes**; 98% of the country is at risk of drought and 31% of it is vulnerable to flooding. The magnitude of earthquakes in Armenia can reach M=7.1 (according to historical and paleo seismic estimations). Historically, Armenia has experienced a number of major earthquakes. Table 1 provides the list of the most destructive earthquakes in the history of Armenia. **The latest destructive earthquake in Armenia had a magnitude of 7.0 and occurred in Spitak** resulting in the damage of housing, factories, community facilities and infrastructure. Approximately 530,000 people were left homeless, 19,000 were injured, and 25,000 people died including 6,000 children. The direct economic loss from the earthquake was USD 15-20 billion and it left a long-term economic impact on the region; the years following the earthquake the effected region still suffered severe shortages of shelter, infrastructure, and other elements of functioning economy.

Table 1. The most destructive earthquakes in the history of Armenia [6]

#	Year	Location	Magnitude
1	1679	Garni	7.0
2	1827	Tsakhkadzor	6.5
3	1840	Ararat	6.7
4	1893	Dvin	6.5
5	1937	Parakar	4.7
6	1972	Talin-Arouch	6.5
7	1988	Spitak	7.0

Besides the earthquakes, the official data of the MoES Rescue Service suggests that 4.1% of Armenia's territory is prone to **landslides and mudflows** and 30% of Armenia's territory is prone to **mudflows and flooding**. Mudflows are usually the result of heavy precipitation, however rainfall in Armenia is too insufficient to be the only trigger. The United Nations Environment Program (UNEP) suggests that poor irrigation, the water supply and sewage system can also contribute to the development of landslide conditions close to the capital, Yerevan. Regarding flooding, the findings suggest that Armenia does not have many water resources; however, the country has a medium sized population living close to

[5] https://www.preventionweb.net/files/workspace/30411_attachment3llrmmanual.pdf

[6] http://www.uniovi.net/uied/Emergency_and_Disaster_Reports/EDR_vol_7__num_4___2020___Disaster_risk_profile_of_Armenia.pdf

water-shed areas and the amount of land at risk of flooding is estimated to be 20-30%; hence, it is one of the hazards that needs to be taken into consideration.[7][8]

Regarding the risks of SOD, the qualitative study participants have also shared information that gave the study additional value. The KIIs suggest that disasters and natural catastrophes frequently happen in remote areas where healthcare facilities are less available and receiving medical attention might require a lot of time. The basic principle of the SOD response mechanism is immediate assistance in order to reduce human loss and suffering. Due to the geological location and challenges accompanied with ambulatory service in remote seismologically active areas, it is important to have a team which can be activated at any time to provide medical service.

The qualitative and desk study findings suggest that Armenia from time to time faces different kinds of health emergencies. The recent instances of state of emergency were triggered by the COVID-19 pandemic and military confrontations close to LoC with Azerbaijan. In September 2020, heavy clashes broke out along the LoC which quickly expanded to other areas of Nagorno-Karabakh. The military confrontation lasted about six weeks until a nine-point ceasefire agreement was negotiated between Armenia and Azerbaijan in November, 2020. The conflict resulted in lots of destruction, as well as military and civilian loss. According to various sources, human casualties on both sides exceeded 5,000 soldiers and at least 143 civilians died as result of the 2020 war.[9] The qualitative study findings suggest that Armenian health sector was under unprecedented pressure as the country was enduring two emergencies simultaneously; it suffered from both war and pandemic at the same time. The qualitative and desk study findings suggest that Armenia requested assistance from WHO and EMTs in 2020 in order to reduce the overload at their clinics. The country received additional medical forces and assistance from France and Germany which helped local specialists increase and improve the medical coverage they were offering people. According to the discourse, the existence of EMT would be very beneficial as such teams have the potential to transfer as many patients as needed.

"We have many remote areas in the country where the healthcare is not accessible and emergencies can also happen there. The experience last year shows that we are in two branded emergencies, so this kind of intervention is definitely needed. We have seen that many emergency medical teams arrived and we have seen the benefit of such teams in real life. So of course, it is very important".

Local stakeholder, KII

"German and French EMTs visited Armenia [during the covid-19 pandemic] … Armenia sent an application for help to WHO, because we could not manage it by ourselves. Several countries responded to our request. We needed infection specialists, epidemiologists, therapists, resuscitation doctors, nurses, etc. We managed their documents and they entered our country… We provided accommodation and food. I think they were a part of EMT, but not the whole team. They were working with local doctors in medical facilities of the capital and in big cities. I counted five teams,

[7] https://www.preventionweb.net/files/12368_ReportArmeniaDisasterRiskReductiona.pdf

[8] https://www.preventionweb.net/files/workspace/30411_attachment3llrmmanual.pdf

[9] https://www.bbc.com/news/world-europe-55174211

but it may not be the exact number. Each team was fixed to one medical facility, because it was easier for them to work together. They stayed for 10-25 days, which depended on the team capacities…"

Local stakeholder, KII

Besides natural disasters, it needs to be mentioned that Armenia is home to the Medzamor nuclear power station which is one out of five Soviet first-generation nuclear reactors that was built without primary containment structures. According to the findings, the nuclear power station is expired and requires safe decommissioning. The EU council of ministers have published a partnership implementation report on Armenia in 2020, which stated that "*the nuclear power plant located in Medzamor cannot be upgraded to fully meet internationally accepted nuclear safety standards, and therefore requires an early closure and safe decommissioning*".[10] Despite this criticism, it still operates. However, the Spitak earthquake and other incidents have shown the danger coming from this power station and its serious impact, just as any nuclear or radiation accident can have influence not only on Armenia, but Georgia, Turkey, Azerbaijan, Iran, Russia and southern Europe.[11]

Altogether, the qualitative and desk study findings illustrated that existence of EMT is undeniably needed; its establishment, high capacity and long-term sustainability is crucial for Armenia to efficiently tackle with different kinds of health emergencies caused by different events mentioned above.

EMT workforce

The key component of EMT is the staff: they are responsible for providing medical care and logistical support. According to WHO standards, EMT type 1 mobile is expected to provide care to 50 outpatients per day. In terms of composition of medical staff, WHO gives clear recommendations that EMT type 1 fixed needs to have at least three doctors trained in emergency and primary care; though there are not clear guidelines on how many doctors EMT type 1 mobile needs; the qualitative study participants have reported that the composition of team members including exact numbers of doctors needed will be decided by the team itself. The WHO minimal technical standard suggests all teams should have a minimum doctor-nurse ratio of 1:3 and a minimum nurse-patient ratio of 1:8 in every shift. Besides the medical staff, EMT teams should have an assistive staff including two logisticians responsible for setting up base camps and ensuring the delivery of equipment to the staff. It is recommended that the team have WASH specialists who take care of hygiene and sanitation. The international practice shows that logisticians usually combine the functions of WASH. It is recommended to have a guard as a staff member or hire one during the ongoing missions in a case-by-case basis in order to ensure the safety and security of the team.[12]

[10] https://data.consilium.europa.eu/doc/document/ST-14188-2020-INIT/en/pdf

[11] https://www.ankasam.org/en/exclusive-interview-major-threat-from-armenia-metsamor-nuclear-power-plant/

[12] WHO. CLASSIFICATION AND MINIMUM STANDARDS FOR EMERGENCY MEDICAL TEAMS. 2021, available from https://extranet.who.int/emt/guidelines-and-publications

The qualitative study findings suggest that EMT in Armenia is created under the Emergency Situations and Mobilization Preparation Division of the MoH of Armenia. The qualitative and desk study findings illustrate that human resources are a very important part of EMT as they require different kinds of medical and psychological preparation. Usually EMT type 1 incorporates teams comprising of 15-60 individuals. The qualitative study findings suggest that Armenian respondents are more aware of specialists needed for EMT rather than the size of the team. A minor share of local stakeholders assumed that **Armenian EMT will have maximum 40 members but a team of 25-30 individuals can also be accepted**. Altogether, the subject of team size is still under discussion and no final decision has been made about it. Unlike the size of the team, Armenian stakeholders are well-aware of the personnel they need for EMT. Information obtained from KIs suggest that **Armenian EMT type 1 mobile will need medical, technical and logistical staff, a team leader, deputy team leaders (one for the coordination of logistics and one for medical) and a psychologist.** The qualitative study participants assumed that Armenia has the potential to comply with internationally-recognized standards and establish I-EMT through the development of the right approach.

Due to the fact that EMTs provide a medical service, the mobilization of qualified medical personnel is a first row task under the EMT workforce. Armenia's focal point is thinking about the development of three channels for EMT medical staff recruitment and selecting them from systems with experience to respond to different emergencies, namely:

- Armenia has a **civil security service** within which medical teams are formed. Since the 1990s, Armenia did not have the opportunity to independently create immediate response teams for the emergency regions. Hence, similar to the previous system, small teams are gathered on the ground of outpatient clinics and hospitals; the teams are able to provide first aid during the health emergencies though they are not as capable as EMT and cannot be considered as an alternative for the internationally classified team;
- Armenia has **small medical brigades** under the MoES rescue teams. *"The [rescue] team consists of 50 persons. Basically they are rescuers and medical brigades work with them – one doctor, one paramedic and one medical car".* MoES also has special teams called Adzagan in Marzas possessing minimal equipment and skills to provide immediate medical support within Marzas. The medical forces of MoES was considered as one of the sources for EMT workforce as their experience is valuable and have better knowledge of emergencies;
- The Armenian focal point is willing to engage military doctors in the EMT workforce. The study findings suggest that MoD have their own military doctors. Due to the fact that Armenia can be found under military attack at any moment, it was perceived that the alignment of military resources to EMT would be a challenge. Hence, the focal point of Armenia plans to cooperate and recruit **former military doctors working as civilians.**

Altogether, Armenia plans to develop three main channels of the EMT workforce mobilization and the recruitment of EMT staff is planned to be carried out via interagency coordination which might turn out to be bureaucratic; hence, good normative solutions need to be made to "*ensure that when a person is attached somewhere, he or she must be available at that place when the request will be made."*

"Under the ministry of emergency, there is an international city rescue team which is certified for about 5 years, it went through two certifications. The members of the international city rescue team will be attached to EMT… the biggest problem is that the republic can be found in a military conflict

at any minute, hence, taking direct responsibilities and obligations from military doctors and directing them to EMT cannot be simple. However, there are a large number of former military doctors who are young but are retired from the army and work with civilians. Hence, the cooperation with these individuals is possible…"

Local Stakeholder, KII

Besides medical staff, **the crucial element of EMT is the logistical and assistive workforce.** The focal point of Armenia assumes that selecting the right logistician will be a challenge as the field itself requires possession of wide range of skills. It is noteworthy that Armenia plans to select separate staff for each technical-logistical function. For example, KIs assume that it is a good idea to select a trained engineer with skills to work with expensive medical equipment, as an electrician, logistician, or as a transportation mechanic. International experience shows that usually most of these tasks are attached to the logisticians and they are responsible for setting up base camps and providing technical support. Hence, **it is recommended to select the logistician who will be able to setup the tents, provide electricity and provide operational support to the team**. It worth noting that the selected logisticians need good preparation and good investment needs to be made there. As Armenia plans to apply interagency cooperation in order to fill in the roster of the EMT workforce, the experience of Estonia should be considered in this regard. Estonian EMT uses the staff of the rescue board acting under the Estonian Ministry of Internal Affairs for logistical support, safety and security as they have more institutional experience of this kind. Their experience shows that such a pattern of human resource management is highly beneficial and this model can be applied to Armenia.

Besides logisticians, the qualitative study findings suggest that the team will need a driver and technical specialist for the mechanic transportation as team itself will be mobile. The findings suggest that Armenia has already recruited the corresponding individuals and it does not have a challenge in this regard. In order to ensure the availability of such specialists during the mission**, it is recommended to select more technical specialists of mechanic vehicles and have five individuals per position in the pool**. In addition, the team will definitely need a driver. The recruitment of drivers does not seem to be challenging as Armenian EMT can use governmental resources. In terms of international deployments, I-EMTs usually hire the driver and rent the car on the ground or bring their own staff and cars which usually depends on the distance to the affected region. In case of the latter, it is important to preliminarily discuss the subject of drivers licenses with the requesting country and ensure that drivers licenses for the medical transport is accepted just as a regular license is.

Interestingly, Armenian KIs assume that EMT will need a psychologist among its members. According to the qualitative study findings, almost everyone involved in the emergency response experiences trauma and approximately 10% of losses are caused by psychological trauma. Hence, KIs think that a psychologist is needed on the team; however, the recruitment of the right psychologist was perceived as a challenge during the interviews.

According to the qualitative and desk study findings, WHO does not provide any guidelines about the qualification of EMT members and gives general recommendation of services each configuration of EMT should deliver; however, international practice shows that each country has its own criteria which is compulsory for EMT membership. According to German, Belgian and Estonian experiences, the EMT team is expected to have the medical education (doctors, nurses, paramedics) and relevant

working experience. For instance, German EMTs require volunteers to have relevant medical education and 2 years of working experience, while Belgian EMTs require the staff to have medical education and relevant working experience, though the Belgian system does not benchmark how many years of experience can be valid for the membership. The Belgian model ensures that EMTs are formed mostly by doctors with adequate experience (2/3 of team); however, they also give opportunities to less experienced volunteers. Interestingly, the same approach was revealed among Estonian stakeholders. The Estonian model ensures that EMT members are working health professionals qualified and recognized in the field; the country does not have much extensive membership criteria. Interestingly, Estonian MoH do not select volunteers with small children for the deployment, while one of the German EMT surveyed during the field phase mentioned they select respondents aged 23-60 as some countries expose difficulties with young professionals. According to the Armenian respondents, the key criteria for EMT medical members will be the relevant medical education and three-years of working experience. Interestingly, Armenia wants to give priority to professionals with foreign language proficiency though it was mentioned that the main criteria for medical members will be professional competence and not language proficiency. The focal point of Armenia mentioned that they would rather select the better doctor without language skills than vice versa. Regarding the foreign languages, a share of international respondents emphasized that the language barrier is one of the main obstacles for international teams during the deployment, as many medical specialists do not know many foreign languages and requesting countries are not able to provide the interpreters. During the international deployments, it is recommended such kind of considerations to be made and discuss the options how the language barrier will be tackled on mission.

Based on international practices, it is recommended to have a roster of volunteers with different profiles. According to WHO, it is suggested to apply rule of 1:5 ratio for number of team members per function in the roster, except for specialist care functions.[13] During the field phase, the representatives of I-EMTs mentioned that their pool of volunteers is at least three times bigger than actual members of basic teams. The international experiences illustrate that countries can develop two approaches of volunteer pool management. First, countries can have a basic team and volunteer pool to substitute the basic team members in case of they are not available. Second, big share of countries fully counts on the volunteer roster and gather the staff during the request among them. Findings suggest that it depends on the country which practice will be perceived as much suitable for national context; however, the creation of volunteer roster is necessary in both cases. The qualitative study findings suggest that the creation of a big pool of volunteers have several advantages. First, a bigger pool of volunteers ensures that the team will gather when requested. Second, it was marked that international deployments are getting longer and usually they last more than 2 weeks; when the deployment lasts longer than 2 weeks a rotation might be required. Armenian KIs emphasized that it would be difficult for them to fill in the roster of staff following a two-week deployment. Based on the experiences of other countries, it is recommended to have large pool of volunteers to overcome this difficulty and have the capacity to rotate staff during the deployment.

International experience suggests that the experience of medical staff with mixed profiles is very beneficial when treating patients with different health conditions. Considering the fact that the focus

[13] WHO. CLASSIFICATION AND MINIMUM STANDARDS FOR EMERGENCY MEDICAL TEAMS. 2021, available from https://extranet.who.int/emt/guidelines-and-publications

of EMT type 1 is primary healthcare and first aid following the SODs, it is recommended to have general practitioners who know internal medicine, pediatricians, gynecologists, dermatologists and physicians with other profiles who will be able to treat wounds, trauma, burns, maternal and child healthcare needs, and more. Noteworthy, the international respondents indicated that the COVID-19 pandemic has increased the demands on infectious disease experts which is also worth considering. In addition, the experiences of other countries indicate that the composition of EMT should correspond to the health needs of affected countries and the type of assistance the requesting country specifies. It is important to check such information before the deployment and ensure that volunteers selected for a particular mission are specialists of the service they will provide in the field conditions and will be accepted by the affected country. In this regard, the well-structured and organized database of EMT volunteers is strongly recommended in order to facilitate the formation of a team during the SODs and have clear understandings what kind of skills and profiles each member has.

"The first approach is to setup the team, which is dedicated to the EMT and nothing else. Some post-soviet countries have this approach but it has negative implications. If the EMT is not deployed for some time, EMT staff lose their medical qualification… Second approach is that you can have EMT roster which can be mobilized during the emergency. If you take this path, you better develop advocacy scenario and procedures with managers of hospital to explain them why this initiative is so important".

International respondent, KII

"It depends on the country you are going to, you should adapt. You should have a very wide range of professionals, then you choose the functions based on the country where you go… if you go to Syria or Iraq, you will need some trauma surgeons, if you go to Namibia, then mother and child specialists will be very important. On the other hand, you strive to have a good mix of people speaking different languages".

International respondent, KII

According to the qualitative and desk study findings, EMT membership is volunteer based and it is not compensated. The qualitative study participants mentioned that recruitment and mobilization of EMT staff require some funding and a strong volunteering culture. Most EMTs are established in well-developed central European countries which have enough financial resources for their operation and a long history of volunteering which the public widely supports. Similar to their European counterparts, Armenia plans to develop the volunteer-based system of EMT workforce. The **countries approach will be based on the strategic communication and shape the positive public image of EMT membership.** According to the qualitative study findings, the EMT coordination center aims to provide information to health facilities about EMT and the prospect of cooperation. KIIs suggest that the focal point of Armenia perceives that it will be difficult to attract EMT members at the beginning as it will be a novelty and interest towards the initiative is expected to be low. Findings suggest that the first mission of EMT will be the key to strategically engaging with a medical and civil audience, increasing the media coverage of EMT and motivating professionals to be part of the initiative. In addition, KIIs informed that it is difficult to mobilize the medical team during emergencies as many doctors have left Armenia and moved abroad to work. Hence, even if Armenian authorities attract the medical force, it

is difficult to determine whether they will be available during calls. Compared to other countries, Armenia has an additional bottleneck in this regard.

> *"In Armenia, it is perceived that it is our duty to help others... doctors know each other, hence, it will be easy to spread information about EMT and its importance. The snow-ball principle will be used in communication and mobilization… The communication policy should explain that membership and deployments are not compensated, but it is capable to provide better benefits for them than financial remuneration...In order to attract more volunteers, the key will be the first international mission and its success… More media broadcasting nationally and internationally EMT deployment has, the interest towards membership will be higher. This will guarantee the team a vast pool of volunteers who will be dedicated to maintaining their places in the team".*
>
> *Local Stakeholder, KII*

Due to the fact that Armenia plans to develop a fully volunteer-based system it is recommended to take into account of experiences of other countries in terms of volunteer pool management. Evaluation of international practices show that most countries focus on volunteering and put a strong emphasis on inclusion in order to increase the motivation of staff. The qualitative study findings illustrated that countries have some established practices that encourage their volunteers to engage in an EMT initiative and participate in the missions. According to the findings:

- It is important that the EMT system is transparent and the volunteers be communicated with as much possible about developments, training opportunities and other news. Volunteers need to know how EMT work is going and what the outcomes are of activities overall;
- The experiences of other countries show that deployment and wider international engagement is the most important stimulus for volunteers. The more deployments EMT make, the more volunteers are involved in trainings and overall activities;
- Another important aspect is the inclusion and development of training modules or curriculums that are interesting for volunteers and correspond with their daily activities or provides the prospect of professional development. International experience shows that the development of a bottom-up system and approach provides better inclusion and commitment, while top-down approaches are more conducive to military teams. The provision of inclusion is particularly important when there is no deployment. The experiences of other countries show that some EMTs allow their volunteers to deliver the trainings that pertain to their particular interests. Another form of inclusion is organizing informal gatherings and meetings which allows the volunteers to develop real and personal ties to the team and feel included.

One of the important part of EMT workforce management is the communication with the employers. According to the qualitative findings, some countries sign memorandums with EMT volunteers and/or employers where the terms of reference are indicated. The respondents noticed that memorandums are usually very short, precise and not very detailed; it states the commitment of volunteers and/or employers to the EMT initiative, expresses their readiness to engage in activities and contains a record of compensation. Interestingly, German EMTs sign the memorandum and Estonian EMTs sign contracts with the employers of volunteers in order to communicate about the initiative and boost their motivation to release staff during the request. However, these kind of arrangements do not guarantee the release of employees during the call as the schedule of medical doctors are not the most flexible and easy to adapt.

"They have contracts for the employers, but it provides no guarantees".

International respondent, KII

"We have memorandums, as they are all volunteers, it is one-page in length, not very detailed, but it states that the work during the deployment will not be paid and the person is part of our volunteer roster. The one-page length memorandums are for the employer too, that provides the commitment from the employer to support the employee's engagement and volunteering in EMTs… it does not guarantee that during the respective deployment, the doctor will be released from the shifts and such kind of risks always exist".

International respondent, KII

According to WHO standards, the EMT teams need to be provided with adequate trainings, retraining and continuous education. In this regard, the standards are pretty flexible and provide the general assumptions but does not specify what kind of trainings each EMT type should deliver. The study findings illustrate that **MoH of Armenia does not have a training center and it is expected that training centers and the facilities of MoD and MoES will be utilized for that purpose.** The Armenian respondents think that the main function of trainings is the explanation of responsibilities and the legal framework of the operation. It is perceived that the EMT team will need at least two staff trainings, two field exercises in a two-year period. In addition, it was necessary to carry out one simulation exercise per year to see how the team works and what are the shortcomings for individual members and the team as a whole. International practices show that countries engaged in EMT initiatives are delivering training modules that include various topics. The qualitative study findings show that EMT preparation trainings should include the following training modules or programs:

- **Induction training** providing information about EMT initiative, their activities and how the international system of humanitarian assistance works;
- **Medical trainings,** which explain what kind of health surveys the EMT type 1 mobile is expected to provide and the limitations; usually, teams provide two medical trainings to volunteers;
- **Logistical and technical trainings about the utilization of EMT equipment, infrastructure management, electricity, waste management, water supply and/or water treatment,** which will largely depend on what kind of water supply plan EMT will have;
- **Safety and security;**
- **Culture, communication and media trainings,** which are important for EMTs that deploy internationally and need to provide medical services to communities which are different from theirs;
- **Field exercises and scenarios.**

The qualitative study findings suggest that part of countries deliver medical trainings; namely, Belgian and German EMTs include two medical trainings in their curricula and some of them make mandatory to go through the medical trainings once in every two years, while Estonian EMT training curricula does not contain medical trainings due to the legislative obstacles. Namely, Estonian Health Board or Rescue Board does not have medical workers or medicals working in the hospital who would be able to deliver such trainings. The Health Board has a contract with biggest hospital in Estonia and it ensures their preparation. Mostly, it is perceived as the volunteers' medical preparation is part of their medical

practice and it is obligation of the hospitals to provide information about the new approaches of treatment to the team members. Despite the Estonian experience, it is recommended to include medical trainings in the training curricula in order the team to know which treatment methods they can use during the deployment. In addition, it is recommended to add a general training module/program about radiation safety, and the treatment of radiation-induced illnesses; however, local stakeholders have a concern that they do not have trainers from the field and the country did not have any active cases for a long time, thereby limiting their understandings of the practice.

Interestingly, the delivery of trainings to EMT volunteers can be carried out via cooperation with different agencies which have expertise in the field and are capable of conducting thematic trainings. For instance, training on safety and security can be delivered by the MoES or MoD; medical trainings can be delivered by different experts from MoH, and more. The study findings suggest that biggest share of countries put strong emphasis on induction trainings due to various factors. First of all, the trainings provide information about the initiative, its importance, how the international humanitarian system works, what kind of living conditions volunteers will live in during national or international deployments, as well as the benefits and challenges associated with it. Second, induction trainings also contain some exercises and scenarios where people are put under pressure or in field conditions in order for them to know how they will react in such conditions and what will they do. Usually, induction trainings decide whether the volunteer suits the team or not and EMTs decide which volunteers will be deployed following this stage. During the field phase, the minor share of respondents reported that they make decision about the volunteers' inclusion in the roster not following the induction trainings but after the completion of all training modules.

Noteworthy, the qualitative study participants have mentioned that a separate training program for team leaders and deputy team leaders is strongly recommended as they need to know more about data gathering, reporting, information analysis and more, as the most frequently they are ones responsible for these duties. One of the German EMTs have shared very interesting approach and experience regarding the data gathering and division of functions between team members. Namely, the respective EMT had one or two management support officers who does reporting with EMT CC, MoH and carry out administrative work including the hiring the local staff (drivers, nurses) for translation or relocation, making medical records and more, while team leader(s) is engaged in the communication outside the team and deputy team leader leads team in the field. Such pattern of function allocations seems interesting and it is up to focal point of Armenia what kind of approach it will adopt; regardless of final decision, the team leader, deputy team leader and/or management officers need the preparation to fulfil their functions on the ground.

According to the qualitative study findings, it is recommended to have at least one person who will be responsible on trainings for the management of EMT human resources. Noteworthy, EMT coordination centers are responsible for coordination of trainings. Even though MoH of Armenia does not have training center and will use the facilities of MoES or MoD, it will be still their responsibility (e.i. MoH) to manage and monitor process. In addition, it is expected that EMTs will have special trainers, who will prepare or retrain new or existing volunteers. The qualitative study participants suggest that training curriculums need constant review, as the guidelines and protocols are periodically renewed and the team itself has new experiences and learns lessons on every mission – this needs to be reflected in the training curriculums. Regarding training, it is important to financially enforce the EMT coordination center in order to have the capacity to develop the curricula, deliver trainings, retraining,

and procure the necessary inventory and provide trainings to the staff. The financial enforcement of the EMT coordination and training centers might be one of the advocacy topics at the decision-making level.

Similar to the content, WHO does not provide any guidelines or directives about the frequency of trainings. However, international experience shows that countries make it compulsory to complete all training modules and curriculums at the initial stage of selection; however, the volunteers are expected to attend several trainings in the following years in order to refresh their knowledge and check their availability or commitment to the initiative.

In terms of trainings, KIs have mentioned that international exchange visits are a very important tool to increase the capacity of EMTs. In addition, qualitative study participants mentioned that German RKI provides international twining partnerships for EMTs where foreign EMTs are aligned with German EMTs in order to increase their capacities, as well as share their knowledge and experiences. The study findings suggest that networking with EMT society and taking the opportunity to engage in the international simulation exercises organized by WHO and other international organizations are important tools to increase the national capacity. It worth noting that funding and long-term financial sustainability of EMT is under the question in Armenia and there is strong risk that engagement in international exercises can be burdened due to the limited funding of team.

Legislative framework

The qualitative study findings suggest that Armenia plans to apply inter-agency coordination in the operation of EMT. Therefore, the EMT establishment requires that the profound legislative support and amendments that will serve three main goals:

- The normative establishment and recognition of EMT;
- The creation of a normative base or legislation for interagency coordination;
- The improvement of emergency and health emergency response mechanisms.

According to the qualitative and desk study findings, Armenian does not have legislative obstacles for the EMT establishment but it needs to issue either legislation or a governmental order for the normative establishment of EMT. Due to the fact that interview with the head of the legal unit of MoH was not carried out, more details about the normative establishment and recognition of EMT was not acquired from field phase.

> *"We can issue a legislation or a government decision to create an EMT. Another issue is cooperation with the Ministry of Emergency Situations and the Ministry of Defense. This will be decided by them".*
>
> *Local stakeholder, KII*

The qualitative study participants have reported that MoES and MoD will also be engaged in the coordination of EMT. Namely, these two agencies are perceived as crucial in the mobilization and preparation of the EMT medical workforce; MoES have medical brigades under rescue teams and next with former military doctors they can become the source of EMT medical staff. In addition, MoH does not have a training center and the plan is to use the facilities of MoES and MoD to prepare and train EMT volunteers. Reviewing the legislative or/and subordinate normative framework is recommended

to determine the functions and responsibilities of MoES, MoH and MoD and their subordinate units in order to allow cooperation and the smooth operation of EMT. Besides, the qualitative study findings illustrate that both MoES and MoH will have medical teams and it is important to carefully define the functions of each unit in order to avoid contradictions, duplication and bureaucratic havoc in times of SOD or emergencies.

In the framework of the project, the Armenian legislative framework was studied. The desk study findings of Armenian legislation are divided into several parts and Armenian laws are organized into different categories. The first group of laws studied during the desk phase was the legislative documents and laws which are sourced and developed to deal with different types of emergencies. They are the **Constitution of Armenia, Law of Republic of Armenia about Legal Regime of Emergency State, and Law of Republic of Armenia about Legal Regime of Warfare.** The desk study findings suggest that the Constitution of Armenia and Law of Republic of Armenia about Legal Regime of Emergency State was enacted on March 16, 2020 when the Government of Armenia issued order No298 to declare a state of emergency in order to fight against COVID-19.[14] During the COVID-19 pandemic, managing the state of emergency was carried out by the commandant`s office headed by the deputy Prime Minister. Similar to other countries, Commandant`s office consisted of ministries and governmental bodies including:

- Minister of Emergency Situations of the Republic of Armenia;
- Minister of Health of the Republic of Armenia;
- Minister of Economy of the Republic of Armenia;
- Minister of Territorial Administration and Infrastructures of the Republic of Armenia;
- Head of the State Revenue Committee of the Republic of Armenia;
- Chief of the Police of the Republic of Armenia;
- Director of the National Security Service of the Republic of Armenia;
- Deputy Head of the Office of the Prime Minister of the Republic of Armenia;
- Head of the Bureau for Coordination of Inspection Bodies of the Office of the Prime Minister of the Republic of Armenia;
- Head of the Health and Labor Inspection Body of the Republic of Armenia;
- Head of the Food Security Inspection Body of the Republic of Armenia.

Even though Commandant`s office was comprised of representatives of different ministries and agencies, the qualitative and desk study findings suggest that the main institution in charge of all emergencies in Armenia is the MoES. Regarding the first group of legislation, it is recommended to review the **Law of Republic of Armenia about the Legal Regime of Emergency**. The law provides a list of conditions about when the state of emergency can be issued and establishes the procedures for it. Interestingly, the list of events about when a state of emergency can be declared are more regarding violent acts, seizures or riots that pose a threat to the constitutional order of Armenia and it does not contain records about the SODs and health emergencies which can equally be the rationale for declaring a state of emergency. Therefore, it is recommended to review the law and enlarge the list of events written at very beginning.

[14] https://www.arlis.am/Annexes/5/2020_N-298-N_ru%20artakarg%20dr..pdf

The second group of legislation is about healthcare provision to the people of Armenia. Under this section, two main normative documents are included: **The Law of the Republic of Armenia on Medical Care and Service of Population, and Order No129 of Government of Armenia**. The Law of the Republic of Armenia on Medical Care and Services of Population stipulates that it is a basic right of Armenian citizens to receive medical aid in emergencies free of charge. The law also allows for the involvement of medical workers or clinical residents of the last courses with no appropriate specialization, qualifications and retraining in the emergency medical workforce. Interestingly, the Government of Armenia issued order No129 on February 4, 2021 to reduce the clinical overload. The corresponding order completely or partially terminated the planned hospital medical care and urged medical institutions to discharge patients or transfer them to other medical institutions and vacate the existing beds as much as possible.

The third group of laws included the **Law of Republic of Armenia on Civil Defense and Law of the Republic of Armenia on Population Protection in Emergency Situations** (1998)[15]. The Law on Population Protection in Emergency Situations compared to the Law on the Legal Regime of Emergency State has a wider definition of emergency and includes records about the natural or ecological disasters and epidemics which is very important. Interestingly, the Law on Population Protection in Emergency Situations contains a separate chapter on rescue forces. It is recommended to review the law and incorporate a separate chapter about the role of EMT and/or MOH in responding to large-scale health emergencies. One of the most important legislative documents for emergency responses is The **Law of the Republic of Armenia on Civil Defense** (2002)[16] according to which civil defense is *"a system of activities for the protection of population and material values or for the defense preparation in case of armed attack on the Armenia, existence of its direct danger or declaring war by the Armenian National Assembly."* According to the desk study findings, the definition of danger and defense written in the Law is centered around the war. Correspondingly, Law on Civil Defense recognizes the following structures as forces responsible for civil defense:

- Civil defense army;
- Rescue forces;
- Civil defense formations;
- Armenian armed forces and other subdivisions.

It worth noting that COVID-19 has changed the definition of security, defense and the role of health systems in terms of protecting the overall population. Based on later developments, it is recommended to enlarge the definition of security and include the Minister of Health of Armenia and its subordinate divisions including EMT as one of the forces responsible for civil defense in case of emergencies and health emergencies. In addition, it is recommended to review and issue amendments in **the Law of the Republic of Armenia on the Rescue Forces and the Status of the Rescuer and Law of the Republic of Armenia on the Rescue Service of Armenia**. These two laws regulate the activities of the rescue service and rescuers. Due to the fact that the MoES has the medical brigades under the rescue teams and they are the major agency responsible for the coordination of emergencies in the country, the relevant

[15] http://www.parliament.am/legislation.php?sel=show&ID=1760&lang=eng#7

[16] http://www.parliament.am/legislation.php?sel=show&ID=1286&lang=eng#7

records can be issued in the law about the cooperation with MoH and EMT in case of health emergencies or large-scale SODs.

EMT activation

The qualitative study findings suggest that Armenia aims to create EMT for both national and international responses; hence, the mechanism of national or international activation of EMT can be very different as they are associated with different types of resource mobilization.

In terms of national responses, Armenian KIs suggest that the **decision about the national activation of EMT can be made by the Minister of Health of Armenia**; the suggestions made by other countries show that the EMT activation plan and indicators should be incorporated into existing response mechanisms. The benchmark indicator should be determined about when the EMT will be activated for national responses. The study participants mentioned that emergency health crises can be caused by armed conflicts, pandemics and SODs. On its own, natural disasters can also be local, regional and sectorial. Hence, it is important that response plans include which level of emergency situations and indicators require the activation of EMTs. According to Armenian respondents, **the decision about the international deployment of EMT should be made at least at the level of Deputy Prime Minister as it is both a political and strategic decision which requires allocating additional funding and resources.** Unlike the national responses, international deployments require a separate allocation of resources.

In the event that Armenia has a health emergency and requires the activation of foreign EMTs, the country can make a request in three possible ways:

- Publishing the request on the Virtual Authority platform;
- Issue the request via international organizations like WHO, UN, EU, and others.;
- Directly approach the country in question for assistance.

KIs have mentioned that the request issued by the country should include information about the field of expertise that is needed and which teams are already deployed on the site in order for them to better evaluate their capabilities, gather corresponding teams and create additional value. Following the request for assistance, the country should go through a self-evaluation process and assess whether the team has enough staff to mobilize and gather for missions; all the equipment is available and the team is logistically ready; the strategic decision about the international deployment should be made by the respective authority; following the offer of assistance, the country in question needs a final confirmation from the requesting state about the deployment to start transporting medical assistance.

EMT mobilization

EMTs are on a stand-by regime and they can be activated at any time. However, the mobilization, deployment, registration, tasking and setup require some time. Noteworthy is that the mobilization processes of EMTs for national and international responses differ from each other although they share one similarity. In both cases, self-evaluation should be made and the availability of staff and equipment needs to be considered. Interestingly, in terms of national mobilization, the issues of activation and mobilization are strongly interconnected as they require clear activation procedures written in the EMT SOPs/protocols and volunteers need to be well-informed about them; in addition, the relevant decision-maker should be allocated who will be responsible for national activation in order for the

EMT coordination center to start the mobilization of volunteers, pack all inventory into boxes, identify the location for base camps, deploy the team and all technical, logistical, and medical inventory to the affected region, to start setting up base camps and the overall operation. At this moment, Armenian stakeholders are more centered around defining activation procedures for the national or international deployments which is perceived as a key for the national or international mobilization of Armenian EMT.

According to WHO standards, it is expected that all types of EMT demonstrate the ability to deploy and become operational in the field within 48-72 hours of a disaster in order to provide a coordinated response and referral chain. The qualitative study findings suggest that the **Armenian team will not have challenges in terms of mobilization for national responses and it will comply with WHO standards. However, Armenia does not have a clear vision for how much time will be needed for international deployments as they do not know the geographic scope of engagement and means of transportation they will utilize to reach these regions (carrier plane or trucks and lorries).** Therefore, the country assumes not to have preliminarily determined a response timetable and have individual response schemes for each case. Based on international practices, it is recommended to have preliminarily determined the geographic scope of engagement whether the Armenian EMT will respond nationally, regionally and/or internationally, what means of transportation will be used to reach these countries/regions, how much time will be needed for the local mobilization of staff/logistics and transportation to the affected area. Considering the fact that Armenia has a risk of financial sustainability, the solutions to the geographic scope and choices of means of transportation need to be affordable and responsive to the existing resources.

> *"If the land transportation will be used for the mobility, it will depend on the distance and kilometers. National responses will not require lots of time, it will be fast and immediate. Deployment in other countries will depend on may factors including availability of carrier airplanes. In terms of mobilization and deployment in Georgia, the ministry of health will make calculation how long it will take to go to Georgia and vice versa".*
>
> *Local Stakeholder, KII*

Usually following SODs and health emergencies, EMTs are activated either nationally or internationally. Compared to national deployment, the international deployment of EMTs is associated with more bureaucratic obstacles. According to the qualitative study findings, the bureaucratic issues of mobilization are hardly ever as burdensome for governmental EMTs when compared to NGO-managed EMTs; however, they need to be reviewed and considered during both the initial and operational phases of EMT:

- First, EMTs are usually formed ad hoc when the need arises and therefore, they may face **visa issues**. Noteworthy is that Armenian KIs assume that visa-related issues need to be seriously considered as country needs the visas for entering most of countries. According to Armenian respondents, the issuance of a visa can be easier if the requesting country has diplomatic ties with Armenia. Regarding Georgia, the representative focal point mentioned is that Armenia has a visa free regime with Georgia and it will not cause problems for the deployment in the future. The international practice illustrated the importance of communication with volunteers' every time to have valid passports and documents so that it will not be an obstacle

to the mobilization or the departure of team members who have gathered together. Interestingly, if the deployment of EMTs require visas the coordination centers centrally submit applications to the relevant embassies. It is worth noting that government EMTs have some advantages when it comes to bureaucracy, as the Ministry of Foreign affairs, embassies or the personal networks between international partners might help resolve bureaucratic issues with more ease.

- Second, doctors need to have **medical licensing and/or accreditation** in order to carry out their practice in other countries. The qualitative study findings suggest usually medical licenses are also part of the acceptance process and internationally recognized EMTs hardly have these kinds of issues; however, some countries might have different regulations and the surveyed KIs explained their approaches to avoiding such implications. According to the findings, it is important to always check country specific regulations if temporary medical licenses will be needed, share the list of personnel and their qualifications before the deployment and make preliminary agreements about whether they will have confirmation from the affected country or the temporary licenses will be issued on site. The German, Belgian and Estonian examples show that their EMTs usually do not have issues with medical licenses during international deployments. Only exception was one of the German team having some difficulties around the functions of paramedics in Mozambique. The respondent mentioned that they do not have many nurses and their system is based on the paramedics. Due to this fact, they had difficulties with EMT CC during the mission in Mozambique as they could not understand the functions of paramedics and scope of their activities. In order to avoid further implications, the EMT coordination centers in Belgium and Germany have databases of volunteers that gather preliminary information about their medical profiles and licenses. During peacetime, German and Belgian EMT coordination centers prepare English copies of volunteers' medical licenses in advance, while the Estonian health board acting under the MoH provides official letters to the team stating that EMT members are working professionals in the field.
- Third, EMT teams have a lot of inventory which needs to go through **customs** so the equipment, documentation, medication, and more are all properly checked. Noteworthy is that a share of Armenian KIs reported that Armenia has a flexible customs regulation for humanitarian aid including medical assistance. Customs regulations are eased even in the case of drugs and medication; they are monitored but not very strictly. A minor share of Armenian respondents reported that German and French EMTs visiting Armenia during the pandemic had issues with customs, which were perceived as quite "normal". Accordingly, the MoH addressed the office of the Prime Minister in order to allow teams to donate their equipment like humanitarian aid without any customs fees. Qualitative study participants have not shared more details about the normative acts that bottlenecked the process, but it is recommended to review and simplify the customs regulations for foreign EMTs. As for international deployments of Armenian EMT, the participants of the qualitative study have mentioned that it is worth being informed about the current custom regulations of the country before the deployment, to have a proper list of inventory so that hazardous items can be properly separated in order to properly clear any review with customs. In addition, it was mentioned that problems with customs can be connected with medication as some countries forbid particular types of medicine. One of the respondents remembered that during their mission in Libya their team was stopped at customs because they carried antidotes. Even though the team leader informed the government that

they would carry with them ethanol solution, the customs authority still confiscated them. Regarding customs, the study participants have mentioned that EMT CC can be instrumental and relevant and government decisions can be issued during emergencies to facilitate the process.

- Deployment in some countries might require **vaccination passports** for each team member in order to ensure that foreign insects will not harm any staff member. In addition, different countries have specific COVID-19 regulations; hence, the provision of relevant vaccination passports for the EMT workforce needs to be considered.

The experiences of other countries have illustrated that besides bureaucracy, there are other significant factors that might be obstacles to mobilization and needs to be taken under consideration. Respondents from Belgium, Estonia and Germany have reported that the mobilization of staff for international missions is a pretty unpredictable process and you never know what to expect in each case. The family and workplace are considered the major factors that might influence staff mobilizations. The bottleneck of the process is that you might need to ask several times to gather the desired number of team member. International respondents recommended having a functional activation system in order to receive a clear backup in a particular period of time. For instance, Estonia sends availability requests via SMS and expects feedback in 1-2 hours. Hence, it is important that preparatory trainings include information about both activation and mobilization. It should explain to volunteers that they need to state their availability in particular periods of time and their availability statements should imply that the employer was communicated with, and family or personal life-related considerations was made and they are ready to be deployed for two weeks.

"First you want to know whether you want to engage or not, then you need to know if there is any special expertise needed. Your volunteers need to know how the activation works, you might use SMS or App systems for the activation, where people can say they are available or not. It is important for the volunteers to know that when they state their availability it has to be clarified with the employers or their family. The system should not be built in such a way that I can say I am interested but still need to clarify whether I will be released from work or not. The organization needs the clear backup."

International respondent, KII

"For papers I do not see many problems, because we are the ministry so we have support from the customs and Ministry of Foreign Affairs. The Ministry of Foreign Affairs is going to have the first contact with that country to support us if we arrive. The support is international network, we all have a very big networks, so if something happens in Armenia for example, I call my colleague in Armenia and ask what do you need, some special support".

International respondent, KII

EMT Coordination

According to the study findings, EMT operation needs a strong coordination mechanism and each emergency response might require coordination between governmental and international organizations. The findings suggest that in terms of international deployments, the Ministry of Foreign Affairs and Armenian Embassies abroad will be engaged in communication and coordination

permanently. In addition, other governmental agencies might also be communicated with to receive information about the risks associated with deployment in particular countries. Besides, the exchange of information with WHO and other international organizations can also be helpful. Regarding the international organizations, KIs reported that they have the potential to play a crucial role in EMT operations and support teams, for example, with food, water, funding, logistical assistance, transportation, fuel, electricity, and more.

At the national level, EMT preparation, coordination and emergency response will be based on inter-agency cooperation and the mechanism will cover three main agencies: MoH, MoES and MoD. MoH will be the leading agency when it comes to EMT coordination, as the structure will operate under its mandate; in addition, MoH and MoES will be the most prominent agencies in the management of health emergencies where EMT will play a crucial role. MoD will be a supportive agency and assist the EMT coordination center in the mobilization of former military doctors; it can also share its training facilities for preparing and training EMT staff. The further engagement of MoD in EMT coordination is expected during military confrontations or large scale disasters when the armed forces are also deployed. MoES is the main agency in Armenia responsible for emergency responses and their coordination. The Ministry can contribute to establishing EMT by facilitating workforce mobilization and sharing their training center with MoH. In addition, it is expected that MoH and EMT will cooperate with MoES during various emergencies the most frequently.

EMT coordination patterns are pretty similar for every country. Qualitative study findings suggest that countries with EMTs usually have an Emergency Operation Center (EOC) which unites experts responsible for emergency health operations and function within the respective Ministry of Health. During emergencies, the EMT Coordination Cell (EMT CC) is usually created under the EOC. In case the countries do not have EOC, the EMT CC usually functions under the emergency headquarters established within MoH. Qualitative study participants have reported that the EMT CC is in coordination with the Public Health EOC Network (EOC-NET) during health emergencies, which provides assistance to national governments to coordinate operational information and resources for the strategic management of public health events and emergencies. The objectives of EOC-NET are:

- The promotion of best practices and standards;
- Supporting the EOC capacity building in countries;
- Strengthening collaboration and coordination between EOCs and partners for effective response.[17]

According to the desk study findings, the vision of EOC-NET is based on the WHO constitution suggesting that WHO should provide "*appropriate technical assistance and, in emergencies, necessary aid upon the request or acceptance of Governments".* In addition, "*the International Health Regulations (IHR) (2005) Article 13 requests that each State Party shall develop, strengthen and maintain the capacity to respond promptly and effectively to public health risks and public health emergencies of international concern".* The EOC-NET is created to meet the requirements set by WHO, increase the capacities of national EOCs in order for them to provide efficient response to public health risks and

[17] https://www.who.int/groups/eoc-net

public health emergencies particularly those of international concern.[18] Noteworthy, EOC-NET is eligible to assist countries in coordination of health emergency and emergency responses, while qualitative study participants have reported that other international organizations can also contribute to the emergency responses via financing the deployments and facilitating the communication, information-sharing between the affected country and called EMTs in order the country to receive the needed assistance. The qualitative study findings show that engagement of international organization (except WHO) in coordination process is limited though their overall role is crucial for the successful management of emergency responses.

The qualitative study findings suggest that the EMT CC is a temporary structure which is created in the countries during crisis. EMT CC has the chair and a range of different experts, for example experts of logistics, medicine, communication, personnel contacts and more. The membership of EME CC requires special qualification and expertise. The most frequently the EMT CC is gathered via international invitations of experts. The EMT CC coordinates the activities of EMTs, gathers information, reports and plans the following steps. All EMT team leaders have the obligation to attend EMT CC meetings and present the statistical information needed for it. According to both the desk and qualitative study findings, the EMT CC is responsible for quality assurance; it evaluates the quality and convergence of care provided by the team to the needs of the targeted population. EMT CC carries out field visits on a daily basis to (1) provide renewed information about SOPs or protocols to the team, (2) delicately evaluate the quality of care that the teams deliver and if necessary issue recommendations about the place in question. If visible deviations are discovered (for example, the team does not provide quality care, cannot adapt to the local context, were deployed without approval, etc.) in such cases, the decision-making is beyond the responsibility of the EMT CC and they need to inform the corresponding and responsible agencies.

"The membership of EMT CC needs the special expertise. I am personally EMT CC expert and I have undergone special trainings… experts can be mobilized from any country to form EMT CC… Generally, it is created with international invitations; for example, I had 18 invitations last year to participate in EMT CC of foreign countries. The experts are shared and if someone has possibility, goes and engages in the work of EMT CC."

International respondent, KII

The coordination of the deployment of EMTs requires considering several steps from both the requesting countries and the deployed team. All of the EMTs crossing the border should be registered (size, capacities, skills, level of self-sufficiency) in order to track and assess the needs of the arrived staff. One important part of EMT coordination is tasking, which can take place either before the deployment or following the deployment and registration. According to the desk study findings, poor tasking may confuse EMT members and affect the quality of their performance. It is therefore recommended to issue tasks prior to deployment as this identifies the location where EMTs should be placed, establishes the leadership, sets communication, reports strategies and prevents the duplication of functions. The qualitative study participants suggest that the location for EMT deployment should be selected very carefully and should meet several criteria. It is desirable that the territory is close to clear water and an electricity source, has access to roads which are not damaged and blocked in order

[18] https://www.who.int/groups/eoc-net/terms-of-reference

for both ambulances to reach them and logistical support to be provided via land transportation. In addition, it is desired that EMTs be located close to semi or fully functional hospitals or facilities which are not functional during the emergency. Noteworthy is that such buildings must go through a safety evaluation before their use in order to check if there is any potential of damage or if they are already impaired by the disaster. The site evaluation is usually the responsibility of the affected country; however, as the Estonian case illustrates, they can use the rescue board team to evaluate the safety and security of area before the team is deployed and constantly monitor them.

Another coordination factor refers to the logistical support of deployed teams. EMTs are expected to be self-sufficient for two weeks and they should not be a burden to the requesting country which is overwhelmed by SOD. A number of respondents in the qualitative study mentioned that self-sufficiency during the missions is a very individualized concept; sometimes teams can be so overwhelmed in the first week that they might need some kind of support from the requesting country including fuel, water, medical/other waste management, translation assistance, etc. In that case, MoH should be able to provide it or I-EMT will be resupplied from its own country. The special plan should be developed beforehand and coordination may be needed to assist EMTs in communication with local providers to make a contractual agreement regarding replenishing supplies when needed.

"It is important to take the guys from the rescue board, who will evaluate the site. However, it is the responsibility of the receiving country. Special knowledge of the rescue team is necessary. They also have good knowledge of security and safety… We also need water. Israeli colleagues suggest to be close as possible to clean water, as the transportation of water is very difficult in many countries".

International respondent, KII

"International teams in the country have to be self-sufficient for about 14 days, but maybe they are overwhelmed at first week, the supplies can be very low and they have to resupply. The competent authority, MoH should help for purchasing the new supplies. If that's not a case it should be set immediately so that the I-EMT can rely on resupplying from the own country."

International respondent, KII

Information gathering, monitoring and reporting

The qualitative and desk study findings illustrated that WHO does not have a monitoring and evaluation system of EMTs which will evaluate the quality of care and work provided by the team. No such guidelines exist. However, WHO standards propose that the Minimum Data Set (MDS) and field visits from EMT CC can be used - these aim to measure EMT performance and monitor the quality of the delivered medical care. A part of the qualitative participants mentioned that EMT operation is multidimensional. MDS include daily reports about deployment, as well as incorporating statistical information about the patients and treatment; however, EMT performance on the ground covers more activities including assessing the teams' capacity, how the logistics are handled, and more. Hence, it is not a tool that provides comprehensive information about the quality of care and performance of the team. It was mentioned above that the reporting language is English; the team leader and/or deputy team leader are usually the ones responsible for the daily reporting and they need have enough knowledge of English to do so; however, the experience of one of the interviewed German EMTs shows that they have management support officers combining this tasks, while EMT team leader is occupied

with outer communication of team to EMT CC, MoH and deputy team leader leads team on the ground. It worth noting that the responsible individuals need to protect ethical norms when gathering and sharing information about patients and treatment. For the information gathering and reporting, WHO proposes the utilization of a paper-based system; some countries have attempted to develop an electronic data record system, but they always have a paper-based backup system in case some technical error occurs.

"Here you have pretty strict protocol from WHO on what, when and how to report. There is a standard formula that every team needs to prepare the reports in the evening, of course you can change the logo and it will be your logo on the page, but content is basically given by WHO and there is hardly any influence you can have here. This is called Minimum Data Set (MDS). This is a given and you cannot change it".

International respondent, KII

"The minimum dataset is just set of key information about the specific patients, but EMT activity on the ground is much larger than this in terms of capacity, logistics, etc. The monitoring and evaluation system should not be dramatically different for fixed and mobile teams, they should determine their indicators during the peace and war times and they have to have quite a similar approach for measuring their performance during the deployment. As for performance, you can use different tools, interaction review and after action review, but formally we do not have any M&E system proposed from WHO".

International respondent, KII

Besides, the MDS as it was already mentioned EMT CC carries out field visits to evaluate the care of the team, provide information about protocols/SOPs and issue recommendations to the teams. Following the completion of deployment, the teams need to hand all gathered information and documentation to EMT CC and develop the existing report summarizing major activities provided by EMTs during intervention.

Infrastructure

Logistics and WASH are significant parts of EMT as they are essential for the functional operation and safety of EMT. According to the desk study findings, logistics govern 13 major areas to ensure that EMT is both sufficient and functional.

- **Power and fuel** – minimum and maximum power and fuel needs should be calculated prior deployment, considering the needs of the equipment applied to ensure a 24-hour response to needs. The capability of power production should meet the needs. The power supply should be applicable for field use and applied by a qualified electrician. Procurement of fuel of adequate quality should be considered in amounts sufficient for EMT needs, but not to harm local population;
- **Communication** – this should cover one primary and one backup communication system. The secondary system should be available in areas where mobile coverage isn't available. All staff members should undergo training on the use of specialized communications equipment.

Communication systems should meet the requirements of the reporting mechanism and safety/ security. Call log systems will assist to trace important calls.

- **Transportation and fleet** – Fleet management and a maintenance plan should be established, considering road conditions, security, travel times, seasonal weather changes, hazards. Registration mechanism (paper-based or digital) should be available. The fleet should own electronic/hardcopy manifests for the goods carried by them. All the goods should be marked in compliance with local requirements, including hazardous goods. Safe driving, speed control and other conditions should be considered. To speed up the deployment process, a logistics platform should be selected and agreed in the host country how the storages will be managed at the local level and who will be responsible for it.
- **Food** – I-EMTs should carry at least 14 days and a minimum one-day emergency food supply covering daily energy requirements (minimum 2100 Kcal person/day). The food requirements of patients/caregivers should also be considered when planning. Food can be Meals Ready to Eat (MRE) or a local procurement may be planned to prepare the meals. EMTs type 1 aren't required to have own kitchen, but in case of food preparation, relevant staff should have corresponding training on food management and safety. Cultural characteristics of the host county should be considered.
- **Warehouse management** – Warehouse management system is in place, with relevant processes and procedures.[19] This system may be outsourced, if sufficient access is ensured. Good Warehouse Practices should be followed, and a clear and logical layout should be provided. Inventory list should be the most up-to-date. Work health and safety national regulations should be followed while handling the complicated/heavy stocks.
- **Pharmacy supply chain and medical stock management** – EMTs should have sufficient pharmaceutical, medical consumables and medical equipment to carry out their activities within the mission, implying the amount enough to operate during 14 days and ensure resupply after the stocks run out. Supplies of oxygen, equipment and consumables should be determined beforehand. The most up-to-date inventories should be available at any time electronically or physically. Relevant storage conditions should be followed, including those for cold chain drugs/vaccines and 72 hours should be ensured for adequate transportation and packaging.[i] National regulations should be applied in order to implement a strict monitoring mechanism for controlled drugs. Oxygen supply should be ensured to address oxygen needs through the clinical care and cylinders and/or concentrators should be applied.[ii] Equipment should be operated, stored and maintained according to the manufacturer's recommendations and relevant logs should be kept for all critical equipment.
- **Donation management** – medicines and consumables should be donated according to written procedures. Unneeded donations should be avoided. Local and international regulations should be met upon donation. Expiry dates, packaging and labelling should meet international donation rules.
- **Facility structure, environment and ventilation** – Physical space should be organized according to the WHO's minimum standards, including lighting, fencing, ground preparation, and

[19]Sphere. Humanitarian Charter and Minimum Standards in Humanitarian Response [Internet]. 2018. Available from: https://handbook.spherestandards.org/en/sphere/#ch001

sufficient ventilation. Infection control issues should be considered while planning the facilities.[iii] All areas should be easily cleaned and maintained.

- **Site assessment and planning** – EMTs may establish new field facilities or work within or reinforce existing ones. The site assessment plan and rules should be developed by experienced and well-trained EMT representatives, considering future expansion needs. While the equipment is on route the facility, it should be prepared to be built up in a timely and efficient manner.
- **Demobilization** – Coordinated demobilization should be based on specific plans and procedures. It should be in line with an exit strategy. This phase is called "reverse logistics" and involves checklists to ensure that nothing is forgotten.

Besides logistical activities, WASH technical standards need to be considered, based on IPC precautions. It covers the following points:

- **Water supply** – Sufficient water supply should be available for medical purposes, personal hygiene, drinking, cooking, cleaning and laundry needs for patients, caregivers and staff. Water quantity should be calculated according to the Technical Notes On Drinking-Water, Sanitation And Hygiene In Emergencies.[iv] WHO and national standards should be also followed for treating water. Water quality and safety analysis test kits should be available within the EMTs. According to the international practices, the countries have either water purification procedures or bring water treatment plant with them.
- **Hygiene** – EMTs should have sufficient facilities for handwashing, showering, menstrual hygiene, and other hygienic needs that consider the local, cultural context. Relevant procedures should be established according to available WHO standards.
- **Environmental cleaning** – Documented protocols, procedures and materials should be developed for EMTs for immediate, routine and terminal cleaning.[v] Relevant kits should be available, including spill kits. Staff should be educated / trained in a relevant manner. A monitoring system should be established.[vi]
- **Healthcare waste management** – EMTs should be acknowledged with relevant WHO processes, local and international standards for waste management and follow them.[vii] Relevant SOPs should be developed and staff should undergo appropriate training.[viii] Vaccination of personal responsible for the WASH is recommended by WHO.[ix]
- **Sanitation** – relevant sanitation facilities and procedures should be available and calculated;
- **Vector and pest control** – Routine measures for the identification of agents, vector control, environmental hygiene, personal protection and surveillance should be available for staff.[x] The WHO classification standard suggests relevant control measures as well.[xi]
- **Dead body management** - dead bodies should be stored with dignity, but EMTs aren't expected to provide forensic pathology, disaster victim identification or mass storage services.[xii] According to WHO standards, EMT type 1 mobile is expected to determine a dead body management procedure which should include a tagging and identification process of any dead body or of body parts; though WHO standards suggest that a separate area (tent) for the storage of two dead bodies is applicable to EMT type 1 fixed and not to mobile.

The desk study findings provide comprehensive and complete information as to what kind of logistical support EMT need for the setup of a mobile team. The qualitative study participants mentioned that theoretically all of these components are important and necessary for EMTs in order to classify both

the visit and the concept; however, it is important to know how many members you will have and what kind of equipment and logistical support you will need for it, particularly during the early stage of establishment. In the framework of this study, Annex 5 was elaborated presenting the compiled information about the necessary infrastructural and logistical requirements from the WHO Blue Book (2021) in relation to EMT Type 1 mobile and the list of inventory for the operation of base camps and mobile teams. The qualitative study findings suggest that Armenia still has not confirmed the final configuration of its team and it is still not very clear how many mobile teams and personnel will be in EMT. Correspondingly, the discussions about the logistical and infrastructural arrangement of EMT has not taken place yet. Therefore, the list of inventories given in Annex 6 is a draft version, which needs to be processed and looked through by the team leader and logisticians of EMT as they are the ones who will use and have final ownership over them.

According to the qualitative study findings, **EMT type 1 mobile needs base camps and accommodation, a treatment area for patients, medical equipment, as well as supplies for treatment and transportation.** The infrastructural requirement and operation support standards are similar for all typology of EMT as teams need water treatment, power supply, infrastructure for camp, waste management, hygiene areas and more. However, qualitative study participants have mentioned that the infrastructure of the mobile team is not as big as an infrastructure of fixed one; the infrastructure and base camps of mobile teams are smaller and portable allowing relocations in different areas. In terms of tent infrastructure, it was also recommended from qualitative study participants to have base camps for accommodation and treatment area; stretchers, sleeping bags, a water treatment plant or water purification equipment, generators, lighting, some kitchen equipment, the equipment for hygienic procedures including toilets, separate toilets for infected patients, handwashing facilities, showers, washing machines and more. Noteworthy, during the field phase Armenian focal point had consultations with the representatives of MoES about the infrastructural arrangement and logistical support of EMT. According to the findings, MoH aims to have access to the camps of MoES and the consultations are still ongoing; the focal point of Armenia shared that they will need at least 10-12 tents for the accommodation of team members, triage, temporary accommodation of patience, etc. Further details about the infrastructure is not clear yet. With regard to base tents, the international experience shows that it is important to make a good investment in quality tents in order to avoid leakages and other breakdown. It is important to preliminary determine the geographic scope of activities to identify what type of materials you will need to operate in particular region. Besides, it is beneficial to have tents for the cold or warm climate conditions. During the interviews, it was mentioned that tents for EMT need to be heavy enough to maintain a solid structure during windy and bad weather.

"For mobile, you can go everywhere. You can go to village A, but you have a base camp in village B. In village B, you need everything to survive by your own. You need power, water, waste management, food, accommodation. Communication means, everything should be available at the base camps… Team need to provide all their materials for the base camps. Only support the requesting country can provide you is the selection of place and informing you to go there. Maybe they can support you with fuel and transport, but you need to have everything… but it is a minimum standard, the self-sufficiency is the minimum requirement. If you are not self-sustained, you cannot have verification. It is a big red line."

International respondent, KII

"After discussing these issues with my colleagues from MoES, we think that we will need at least 10-12 tents for accommodation of team members, triage, temporary accommodation of patients, etc. We also need toilets, showers, waste management for the team as well. We may apply the tents of Soviet production, but there are also modern tents, it will be discussed".

Local stakeholder, KII

The qualitative study participants have mentioned that EMT type 1 mobile will need a treatment area for patients. According to the representative of the international mobile EMT, *"different options exist for how the working space for mobile teams can be setup. You can work in existing premises, so you go to the hospital and you will work in the existing health facility. Another way is you use a small tent, mark a place and provide some basic healthcare or you have some big health facility like a fixed one"*. In addition, as the team is mobile, it was recommended to ensure that during the deployment the team has access to the car or transportation so as to ensure their relocation in the SOD area. According to the qualitative study findings, one of the biggest concerns of Armenia is the safety and security of EMT type 1 mobile team members while relocating to an affected area. It is anticipated that the affected region will have limited capacity to deploy EMT type 1 mobile at the emergency site, meaning treatment and the following relocation in affected areas can be a challenge. Based on international experience, it is recommended to put a strong focus on the preparation of team members during the trainings; the trainings on safety and security should include information about how the teams can evaluate their surroundings and ensure the safe relocation in SOD affected regions. In addition, cooperation with focal points and EMT CC can be helpful as affected country is responsible for the selection of safe area for the base of operations. During national deployments, it will be the responsibility of Armenia to select a safe place for the team`s operation. It is recommended to use the resources of MoES and MoD in site evaluations. The experience of Estonia shows that their team holds on to the experiences of the rescue team for safety and security for both national and international responses. They constantly evaluate the site and mark places; if security risks close to the area are increased, they recommend that teams change the location of base camps and move to a newly selected area.

The qualitative study findings suggest that it is important to think about how the inventory and boxes will be stored and transported to their final destination. The lessons-learnt from other countries show that poor management of this component can prolong the deployment and obstacle the process. The international experiences and lessons-learnt showed that the organization of inventory boxes are one of the important task of deployment. It was recommended to use wooden boxes to protect the inventory though alu boxes are also an option. In addition, the international respondent engaged in the logistical support of EMT have mentioned that *"it is important to have a good system [of organization]. You need to mark your boxes in a good way so that it will be easier for staff to find materials, for example, for the accommodation, power supply, water supply, medical supply. Then they can quickly setup at least the base camp for the accommodation. If you do not have a good structure of equipment and boxes are not marked very well, it will be pretty difficult to manage process when you have two trucks with 200 boxes. When you offload, you need to have clear structure of equipment, which box you need in priority to buildup certain part of your camps… if you want to set up accommodation first, you need to have this box, if you want to setup mobile or fixed then you need this box. That is one of the lessons that we learnt to keep in mind that you have a clear structure and everybody need to know it."* According to the qualitative study findings, it is important to have a general SOP how to manage the

logistics on the ground. The respondents reported that SOP need to be flexible, provide general guidance and leave some space for the adaptation to the needs on the ground.

> *"We have general SOPs and we have some sketches or drawings how to build up camp. You have to be flexible because you will never know if the space will be enough and you will need to build up only part of your camp… or the ground is not flat, it is angled... we provide some options how it can be arranged… but they are always flexible to change the setup and adapt to the needs and possibilities on the ground."*
>
> *International respondent, KII*

Another findings of qualitative study suggest that total weight of EMT logistics and inventory can weight from 3 up to 12 tones. In order to facilitate the management of logistics on the ground, it is recommended to prioritize the inventory that is of light materials and is men-handled. The experience of Estonia shows that they do not purchase inventory weighing more than 300 kg. Sometimes the unloading of inventory from planes or trucks can be challenging; hence, it is important the boxes and inventory to be organized in way that from 4 to 8 people could carry the box and unload lorries for the setting up of base camps.

In terms of medical equipment, qualitative study participants have mentioned that it is important to have equipment and medication that are important for lifesaving procedures; in addition, EMT should ensure that medical equipment purchased for teams can be used in rural areas too. In terms of consumables and pharmaceutical medications, the qualitative study findings suggest that Armenia plans to purchase pharmaceutical medications, consumables and store them under the hospital. The head of hospital's pharmacy will be responsible for their storage and replenish them every six months, while the EMT coordination center will carry out monitoring to evaluate whether materials are valid and suitable for EMT type 1 mobile. International practice shows that such an approach - purchasing the medical consumables and pharmaceuticals - is not cost-effective and countries usually use warehouse turnover to provide pharmaceuticals to emergency teams. Namely, they contact the contracted pharmacy chains, send them a list of medications and consumables, and companies have an obligation to provide items in a period of three days. That approach is an internationally well-recognized practice and it can also be applied to the case of Armenia.

Standard Operation Procedures (SOPs)

According to the qualitative and desk study findings, the elaboration of SOPs for EMT is very important. The qualitative study participants have mentioned that SOPs are created by the structure within which EMT functions and the information about SOPs need to be shared with national focal points. In the Armenian context, focal points and EMTs will be gathered within the same structure – Emergency Situations and Mobilization Preparation Division of the MoH of Armenia. Hence, it will be responsible for the elaboration of and sharing information about SOPs with the team. The qualitative study findings illustrate that Armenian authority does not have deep understanding of SOPs and it is anticipated that they will develop their own SOPs with a WHO mentor. Interestingly, Armenian KIs reported that they anticipate all departments to write their own SOPs for their functions; however, they do not know if this kind of SOPs will be approved by the accreditation experts.

"We can develop the SOPs; each unit can write own SOPs. Another issue is how they will be accepted by the international society. Currently the standard measures for each disease are not approved yet. I think these SOPs should be developed by WHO.".

Local respondent, KII

The international experience shows that usually the elaboration and approval of SOPs are under one agency even though the coordination can involve multiple institutions. Each SOP can indicate the written notes about the agencies involved and their functions. The qualitative study findings suggest that Belgium has a very interesting approach in terms of EMT elaboration and adoption. Noteworthy, is that the country has a government-based EMT and its approach towards SOP adoption is based on multidisciplinarity; namely, the team leader of EMT is responsible for the elaboration and adoption of SOPs, but before a final approval it goes through an evaluation in the health advisory board where the experts from different fields are represented including medical doctors, nurses, logisticians, water purification experts, public health experts, and members of the Ministry of Defense. The health advisory board is responsible for the approval of SOPs and the team leader of EMT must officially sign it. The findings suggest that this practice is very beneficial and the establishment of this kind of temporary board at least during the initial phase of establishment can be helpful.

As was already mentioned, during the accreditation process, WHO allocates mentors who help counties upgrade the SOPs, evaluates whether they meet the international standards, offers the relevant amendments and shares the experiences of other countries too. Hence, following the self-evaluation, the mentor's guidance regarding SOP is key for successful classification. The respondents from other countries have reported that SOPs are a very important part of EMT, as every standard and chapter from the Blue Book that applies to the team needs to be written in the SOPs and they should guide the team members how to respond to emergencies, who is responsible for particular functions, and more. In order to create a solid system of SOPs, it is important to organize them structurally. The SOPs need to be classified and numbered. For instance, Belgium has classified SOPs and they are numbered. The SOPs starting with 1 are about medical procedures and under it are SOP 100 and 101, the SOPs starting with 2 are about logistics, those starting with 3 are about security, etc. So they are organized very structurally. In addition, it was mentioned that SOPs need to be short, precise, not very detailed and fixed. They need to be flexible, helpful and should not be elaborated in a way to undermine or block the system in place. In addition, it was mentioned that SOPs are a living document that need to be updated annually and should reflect progress made in technologies, medicine and other fields related to the operation of EMTs. Some elements might require even more frequent reviews than once per year.

"You need procedures everywhere, because when you miss one step… a very stupid example is procedure about generator. If no one knows how it works and there's no procedure, then you don't have any light... It should describe but in the flexible way, because it's a living document… a procedure today is not a procedure tomorrow. When buying a new generator, there should be a new procedure. For medical procedures, you can operate an appendicitis today with a laparotomy, tomorrow you can do it with laparoscopy so there is an evolution in everything".

International respondent, KII

The qualitative and desk study findings suggest that the EMTs need to develop their own SOPs which will answer the questions about how they are going to deliver care in field conditions and prepare staff. According to the Blue Book, for instance, there should be separate SOPs for safety and security, and mobilization. Namely, Blue Book suggests that:

- Security policy should be in place to meet the moral and legal duty of care on the headquarter level. Security Risk Management processes should be available on the field level, considering the cultural and gender context. The Critical Incident Management system will deal with serious security events. An Occupational Safety and Health plan should be developed to address the workplace safety. Staff should be competent and trained in firefighting, and be familiar with the relevant procedures and evacuation plans.
- Activation protocols should be developed to ensure a timely mobilization. The establishment of communication channels is vital throughout the whole process. Customs clearance procedures should also be developed and addressed. In some cases, start-up kits for 14 days' supply total may be available for EMTs to assist mobilization process.

Altogether the qualitative and desk study findings suggest that SOPs need to be comprehensive and they should cover all directions. Based on the qualitative and desk study findings, the preliminary list of SOPs is elaborated and offered to the respective organizations. Of course, the SOPs need to be reviewed by the team and determine which one will be suitable and needed for them; in addition, the SOPs will go through a final refinement with WHO mentors who are the most competent individuals in this regard and are capable of issuing valuable recommendations. In the framework of this study, Annex 5 provides the suggested list of SOPs for EMT type 1 mobile.

Besides SOPs, the qualitative study findings suggest that the elaboration of the written code of conduct is very important for EMT. The experience of Belgium and Germany shows that it is one of the key documents for the team as it provides guidance to the members on how to behave in the team. According to the qualitative study findings, it is compulsory for every member of Belgian EMTs to get to know and sign the code of conduct before every deployment.

Policy implications

The KIs have reported that there are some factors that are of great importance and need to be looked at during the establishment phase. The qualitative study participants have suggested the following implications and considerations need to be made during the establishment phase:

- Some of the respondents underlined that strong leadership from the MoH is necessary to provide sustainability to EMT. They are the key agency in charge of process; hence, their proactive engagement with other actors is crucial for the success; Besides, qualitative study participants emphasized the need of advocacy. According to the findings, advocacy needs to be carried out at two levels - at higher decision-making and private sector levels. Each advocacy level has different goals but they are key to addressing the biggest challenges associated with EMT creation in Armenia; namely:
    - ***Advocacy at the higher decision-making levels*** can include the President or/and Prime Minister of Armenia. It should explain the importance and necessity of EMT, geographic scope of involvement, funding and more; the aim of EMT advocacy at

higher decision-making levels should be the long-term functional and financial sustainability of team.

- ***Advocacy at the private sector level*** should include representatives of private hospitals in order for them to know more about initiatives and their role in the mobilization of EMT staff. It is expected that advocacy with representatives of the health sector will positively impact the attraction and recruitment of medical staff during the initial phase and ease relations with employers during deployment to release doctors from shifts.

- In addition, the establishment require both the will and clear decision about where EMT will be located. In terms of sustainability of the system, part of the respondents recommended to establish EMT under an effectively functioning structure in order to avoid the formation of a new body. In this way, EMT will have more access to equipment and will guarantee its sustainability;
- In addition, the EMT requires a clear structure and well-written functions so that the overlap of functions with other agencies will not occur and the provided service will be complementary to already existing systems. In line with the structural arrangements, the EMT creation will require some legislative amendments to create the normative framework for operation nationally or internationally;
- Several KIs have mentioned that EMT creation will require some financial commitments and funding to maintain the system and ensure international engagement. The representatives of international EMTs have noticed that there is a lot of work that needs to be carried out during peace time including the management of the volunteer pool, the warehouse, logistics, and more, which require quite a lot of financial funding and commitments;
- Besides the funding, several KIs mentioned that it is very difficult to make the roster up and running particularly when you have rare deployments. It was noticed that EMT establishment require lots of engagement with volunteers in order to keep them engaged and human resource management is one of the things that needs to be taken into account when it comes to sustainability;
- It is also important to determine the geographic scope of activities whether the country aims to respond nationally or deploy regionally and internationally; in addition, the international deployment of EMT is a strategic decision and it requires the will of the decision-maker regarding the help the provision to other countries.

The study findings illustrated that Armenia has strengths and weakness in policy-related area. The strength is that t**here is a political will to establish EMT under Emergency Situations and Mobilization Preparation Division of the MoH of Armenia**. The new structure has a clear location under Armenia's focal point which it constitutes the best place for its operation. In terms of weaknesses, qualitative study participants have mentioned that th**e lack of leadership and funding was the biggest bottleneck of process**. Namely, qualitative study findings suggest that the focal point Armenia needs to take ownership and leadership over the process though it is missing at this moment. Regarding funding, KIs reported that there is a political will to establish and support EMT but it is difficult to determine how long it will be maintained. Due to the fact that the country went through a war with Azerbaijan in 2020 and is still fighting COVID, it is difficult to imagine what kind of economic situation Armenia will have in two years, what the budget of EMT will be and whether it will suffer from underfunding. As financial risks are very real, Armenian counterparts aim to apply public-private partnerships for EMT financial enforcement and sustainability. It is planned to discuss such an opportunity with the

private sector in order to receive their financial contributions. During the interview, Armenian respondents shared the example of Poland where the private businessmen established EMT with own sources and advertised his brand this way.

"If we are talking about Armenia, it is a quite a different, as I see the need of some efforts towards advocacy. I do not really see a strong leadership at the level of the MoH and maybe it is one of the biggest challenges at the national level. But I do not say that it is unsolvable. Of course, it is solvable, but it will take some time and effort."

International respondent, KII

"Financing is the most difficult question. It is difficult to answer what financial state Armenia will have in 2-3 years, what will be EMT budget and whether the structure will suffer from underfunding… As per funding and budgeting, I think we will not refuse financing from the state, but we can also involve private funding like donations. E.g. in 2019 we discussed a case of Poland, when a person created an EMT using his own resources".

Local Stakeholder, KII

"The first thing is a motivated leadership, that is the most important. If we have it, let's say 99% of the work is done with the establishment… sustainability is also very important because Armenia has very low health financing …"

Local Stakeholder, KII

According to the findings, it is anticipated that selection of qualified team members at the beginning phase will be a challenge. The Armenian authorities assume that **the recruitment and engagement of team leaders, deputy team leaders and the right logisticians will be particularly difficult**. It is already mentioned above that the roster of logisticians can be developed via interagency cooperation and strong advocacy with the private sector will ease the EMT staff recruitment and mobilization at the beginning phase.

The EMT establishment requires the legislative adaptation in order to ensure the smooth operation of team in case of SOD. Normative support and legislative amendments are of great importance when the country plans to apply interagency cooperation for EMT operations. The qualitative and desk study findings suggest that **there is a risk of function overlap between the Armenian MoES and MoH, as MoES has medical brigades under rescue teams, MoH creates purely medical teams and aims to mobilize the medical workforce from MoES**. During national health emergencies, MoH and MoES will work together and cooperate their response; therefore, it is important to write their functions carefully, determine under which institution the medical workforce will work in the event of health emergencies in order to avoid duplication, overlap and obstacles in the overall process.

The study findings suggest that **it is beneficial to identify the geographic scope of international deployments whether the country aims to respond nationally, regionally and/or internationally.** Due to the fact that Armenia aims to create the EMT with possibility of deploying internationally, it is important to determine the scope of the international engagement. This will facilitate the advocacy process, help the team determine what type of logistics they will need to store, what will be the means of transportation and expected budget.

Conclusions and recommendations

The EMT initiative is an international concept that was created to enforce the international humanitarian aid system and contribute to capacity building at the international, regional and national level. The concept provides clear standards and guidelines which need to be customized to the national context in order to improve their systems and make them more resilient towards disaster risk management and health emergencies. The findings suggest that Armenia made some preparatory works to establish EMT. The decision of about the EMT establishment is already made and it is also clear that EMT will function under MoH of Armenia, which is of great importance. The qualitative study findings suggest that biggest bottleneck of process is the lack of strong leadership from the side of MoH and uncertainty of funding. In order to address the budget-related bottlenecks, the strong advocacy campaign at the higher decision-making level is recommended; Next to it, Armenia needs to put effort in clarification of geographic scope of engagement and develop normative base in order to avoid the function overlap between MoH and MoES.

The qualitative study findings suggest that there is lots of instability around Armenia though they are solvable and country has a potential to resolve all bottlenecks and create the well-functioning EMT. The corresponding study elaborated the recommendation package based on the international practices and standards with the aim to further contribute to this process.

- According to the qualitative study findings, Armenia anticipates challenges in terms of medical staff mobilization during the initial phase of project. According to the WHO Blue Book, it is recommended to create a roster of volunteers which will be five times larger than the number of basic team members; it will solve the problems of mobilization and allows for rotation in case the deployment lasts longer than two weeks;
- It is not recommended to have an established team fully engaged as EMT as it can risk the staff losing their qualification. It is recommended to have a pool of volunteers containing specialists with mixed profiles and experiences. In addition, it was recommended to have practitioners of internal medicine, pediatricians, gynecologists, dermatologists, and specialists able to treat wounds, traumas, burns, as well as maternal and child healthcare needs. During the COVID-19 pandemic, there was increased demand for infection specialists. The diverse composition of the volunteer pool allows the country to adapt to the needs of the requesting state and gather the team that will best suit the described request;
- It is recommended that the Armenian team carries out international deployments frequently and assists foreign countries. International experience shows that deployments are the biggest motivation for teams. Carrying out deployments soon after the accreditation is very important for ensuring a positive public image and properly communicating with volunteers;
- International experiences show that the roster management strategies of countries are focused on the transparency of systems, consistent communication and the equal inclusion of members. The study findings suggest that the development of a bottom-up system will be more efficient. In that sense, it is recommended that the respective training center gives space to roster members to deliver trainings that are interesting for volunteers or to organize some informal meetings to strengthen the team's spirit;

- It is recommended to select individuals with knowledge of different languages; the team leaders and deputy team leaders have to know English in order to report to EMT CC during international deployments;
- According to the findings Armenia anticipates difficulties in recruitment of the competent technical and logistical staff. In addition, the country aims to hire separate staff for each technical-logistical function. Based on the international practice, it is recommended to have highly qualified logisticians and attach to them all technical and logistical functions connected to the site infrastructure and operational support (e.g. setting up and technical-logistical support of base camps, WASH, electricity, water purification, etc.). In order to facilitate the mobilization of technical staff, the Estonian model of technical staff mobilization can be applied. It is possible to select the logisticians, safety and security specialists from the MoES or MoD;
- It is recommended to sign partnership memorandums with volunteers and hospitals in order to increase their commitment and clarify the terms of cooperation;
- EMT teams need to go through proper preparation; it is recommended to elaborate the training modules which will be based on international experiences; it is important that the training programs are reviewed once a year to enrich them with new scientific, technological experiences and lessons learnt from the previous activations;
- It is recommended to have an allocated individual that is responsible for the organization and management of trainings;
- It is recommended to ask volunteers to attend several trainings and activities with some consistent frequency in order to ensure their preparation and evaluate their overall commitment;
- It is recommended to carry out lots of field exercises in order for volunteers to know the infrastructure, better know their reactions and work on their own weaknesses;

Legislative framework

- It is recommended to issue a new law and/or decree that will provide normative recognition to EMT;
- It is recommended to review the governmental orders and legislation regulating the emergency response mechanisms in order to improve the existing system, make them more responsive to health emergencies and increase the legitimacy of EMT itself;
- It is recommended to review and issue amendments in the corresponding legislation: Law of Republic of Armenia about Legal Regime of Emergency State, Law of Republic of Armenia on Civil Defense, Law of the Republic of Armenia on Population Protection in Emergency Situations, Law of the Republic of Armenia on the Rescue Forces and the Status of the Rescuer, and Law of the Republic of Armenia on the Rescue Service of Armenia;
- It is recommended to involve the Head of Emergency Situations and Mobilization Preparation Division of the Ministry of Health (MoH), Minister of Health, Minister of Emergency Situations, heads of legal services of agencies and other responsible individuals engaged in the emergency and/or health emergency responses in the review of the legislative framework to issue the relevant amendments and adaptations.

Activation, mobilization and coordination

- It is recommended to develop EMT activation mechanisms at the national level to determine which level of emergency and indicators will require its involvement;
- It is recommended to check the country regulations before the deployment particularly in terms of visa requirements, temporary medical licenses, customs regulations and vaccination passport requirements;
- It is recommended to communicate with team members to always have valid passports in order to avoid visa issues;
- The study findings suggest that medical licenses are part of acceptance. Based on the specific country-to-country agreement, several options can be selected to avoid implications related to medical licenses; teams can have letters from the MoH that medical team members are working specialists in the field, and the doctors can carry the copies of their certificates/licenses, which need to be prepared by Emergency Situations and Mobilization Preparation Division in advance and temporary medical licenses can be issued on the site;
- It is important to check customs regulation before deployment and whether some medication from the list is prohibited. The study findings suggest that equipment should be placed correctly and the list of equipment should comply to logistics placed by the customs authority of the affected country;
- It is important to develop an efficient system of activation; volunteers should know that after the request they need to respond within in several hours and their statement of availability should imply that they are available for two weeks and employer and family-related considerations have been made before;
- EMT national activation will require inter-agency coordination involving the MoES, MoD, and international organizations; international organizations can help countries in the deployment of foreign EMTs; they can be a liaison and facilitate communication between affected country and responding EMTs in order them to receive the medical aid corresponding to the needs on the ground. It is recommended to have a close communication and coordination with international and local organizations with capacity to share their expertise about the emergency response and reinforce the operational performance of national or foreign team (assisting with fuel, transportation, food, funding the missions of foreign NGO-based EMTs, etc.);
- According to the findings, there is risk of function overlap between the MoES and MoH medical teams. It is recommended to evaluate this risk carefully and arrange a system in a way to avoid the duplication of services and overlap of functions between different agencies;
- Particular attention needs to be paid to the cooperation with EOC-NET which can support the local capacity building during peace time; in addition, EOC-NET can support the national governments and contribute to efficient health emergency and emergency response management during the SODs.

Information gathering and reporting

- It is recommended to use MDS for the EMT performance monitoring; it is recommended to always use a paper-based system for information gathering and reporting in order to avoid technical errors.

- EMT CC can carry out field visits to monitor teams and inform them about the amendments in protocols or SOPs, issue recommendations or in case of drastic deviations, inform the relevant authorities.

Infrastructure

- WHO provides very clear guidelines and operational standards covering 13 major areas of infrastructure and WASH. The study findings suggest that there should be a clear vision of how Armenia plans to ensure the self-sufficiency of the team on the site and what kind of logistical support will be necessary for that;
- It is recommended to develop the SOPs for logistics reflecting the national solutions to 13 major areas of operational support of EMTs;
- It is recommended to use members of the rescue service of MoES as logistical staff for EMT;
- It is recommended to have base tents and stretchers which will be available for the training center to deliver training to volunteers. It is important that base camps are solid and heavy enough to endure windy and bad weather;
- In addition, EMT type 1 needs to have sleeping bags, a water purification plan, which will be determined by how the countries provide the water to team, generators and lighting infrastructure, kitchen equipment, a washing machine, handwashing facility, toilets for team members and infected patients separately, showers, etc. As Armenia plans to create a mobile team, they will also need the means of transportation and communication to maintain the mobile team in contact with the base camps;
- It is recommended the logistics and inventory to be light-weight and can be carried. In addition, it is important to use wooden boxes for the safe transportation of inventory;
- It is recommended not to store consumables and pharmaceuticals in hospitals; It is optimal to apply the warehouse turnover for EMT. The international practice shows that it is much cost-effective and efficient strategy. For that it is important to have a list of basic consumables and pharmaceuticals needed for the deployments in order for the team to be self-sustained for two weeks and treat at least 50 patients per day. In addition, MoH needs a contracted pharmacy chain and/or hospital which takes responsibility to provide all consumables and pharmacy in preliminary determined period of time.

SOPs

- International experience suggests the involvement of an expert board and adoption of multidisciplinary approach in SOP elaboration can be beneficial to write the professional response to every procedural question; It is recommended to review SOPs once per year;
- SOPs need to be organized structurally, classified and numbered in order to facilitate further review and amendments in the document. It is a living document so it needs to be short, clear, precise and flexible. The corresponding study provides a structured list of SOPs, which can be addressed by the corresponding authority.

Policy implications

- It is recommended to carry out the advocacy campaign at higher levels of decision-making and private sector levels in order to ensure the long-term financial and functional sustainability of EMT;

- It is important the MoH of Armenia takes leadership and plays a prominent role in EMT establishment and its further functioning;
- It is recommended to identify the scope of geographic engagement to develop a timeframe of mobilization and figure out what type of logistical support of team is needed to operate in particular regions;
- It is important to develop a normative base in order to make services complementary to each other and avoid duplications and/or function overlap.

[i] Cold Chain Management Guideline [Internet]. 2013. Available from: https://bibop.ocg.msf.org/docs/49/L015ZCHG01E_Coldchainguide.pdf

[ii] PAHO. Basic manual on oxygen supply systems in EMTs and AMCS [Internet]. Available from: https://www.paho.org/en/documents/covid-19-basic-manual-oxygen-supply-systems-emts-and-amcs

[iii] Atkinson J, World Health Organization, editors. Natural ventilation for infection control in health-care settings. Geneva: World Health Organization; 2009. 106 p.

[iv] WHO. TECHNICAL NOTES ON DRINKING-WATER, SANITATION AND HYGIENE IN EMERGENCIES [Internet]. Available from: https://www.who.int/water_sanitation_health/publications/2011/WHO_TN_09_How_much_water_is_needed.pdf

[v] CDC. Best Practices for Environmental Cleaning in Healthcare Facilities: in Resource-Limited Settings [Internet]. Available from: https://www.cdc.gov/hai/pdfs/resource-limited/environmental-cleaning-RLS-H.pdf

[vi] CDC. Options for Evaluating Environmental Cleaning [Internet]. Available from: https://www.cdc.gov/hai/pdfs/toolkits/Environ-Cleaning-Eval-Toolkit12-2-2010.pdf

[vii] Y, Chartier. Safe Management of Wastes from Health-care Activities. Second Edition. World Health Organization; 2014

[viii] WHO. WHO Training modules in health-care waste management [Internet]. Available from: https://www.who.int/water_sanitation_health/facilities/waste/training_modules_waste_management/en/

[ix] WHO. Summary of WHO Position Papers – Immunization of Health Care Workers [Internet]. Available from: https://www.who.int/immunization/policy/Immunization_routine_table4.pdf?ua=1

[x] WHO. WHO Global Vector Control Response-2017_2030 [Internet]. Available from: http://apps.who.int/iris/bitstream/10665/259205/1/9789241512978-eng.pdf?ua=1

[xi] WHO. CLASSIFICATION AND MINIMUM STANDARDS FOR EMERGENCY MEDICAL TEAMS. 2021. https://extranet.who.int/emt/guidelines-and-publications

[xii] Management of Dead Bodies after Disasters: A Field Manual for First Responders. Second (revised) Edition. [Internet]. Available from: https://iris.paho.org/bitstream/handle/10665.2/31295/9789275319246-eng.pdf?sequence=1&isAllowed=y

ACT Georgia
8, John (Malkhaz)

ACT Azerbaijan
44, Bulbul av.

ACT Kazakhstan
235, Furmanova st.

ACT Georgia
8, John (Malkhaz)
Shalikashvili,
0131 Tbilisi, Georgia

T: (+995 32) 2 422 322
W: www.act-global.com

ACT Azerbaijan
44, Bulbul av,
"Gulustan Residence"
3344, Baku, Azerbaijan

T: +7 727 250 33 44
W: www.act-global.com

ACT Kazakhstan
235, Furmanova st.
Build. #95, Almaty, 050059,
Republic of Kazakhstan

T: +7 727 250 33 44
W: www.act-global.com

Annex #1 – The list of literature

The list of literature studied in frames of desk study:

1. Minimum Technical Standards and Recommendations for rehabilitation for EMTs, WHO, 2016
2. Global Strategy for the Emergency Medical Team (EMT) Initiative (version 6/02/2018), WHO, EMT strategy advisory group
3. Year in Review 2018, Emergency Medical Teams Initiative, WHO
4. FMT guidelines, Blue Book: Classification and Minimum Standards for Foreign Medical Teams in Sudden Onset Disasters, Health Cluster, WHO, September 2013
5. The Regulation and Management International Emergency Medical Teams, IFRC and WHO, June 2013
6. Grant Application Form 2020 "for Grant for an Action", DRM 2020 Neighborhood and Enlargement; European Commission, Civil Protection Horizontal Issues / Disaster Preparedness and Prevention
7. Other locally available policy and legislative and other documents in both countries relevant to study subject.

Annex #2 – KII guides used for the field phase

KII guide for focal point of Armenia

In-depth Interview Guide for country stakeholders (Key Informants)

Greeting, presenting study goals and objectives, taking informed consent.

Preparing audio recording of the meeting: We ask for the permission to record the audio and explain the goal of using recording audio / online meeting.

Self-introducing of the respondent:

- Please introduce yourself.
- Which entity do you represent?
- What do you do? How long have you been engaged in this activity?
- What experience do you / your organization have in managing emergencies/health emergencies/disasters? What is the target of your activity?

Part 1. EMT workforce
Questions related to WHO standards (for focal points and WHO representatives)

- First of all, WHO suggests us the term EMTs, which were called as FMTs (Foreign Medical Teams) in past. In your opinion which term is more applicable for this purpose and why do you think so?
- What are the basic requirements for EMT members according to the WHO certification standards (skills, education, years in practice, field of operation, etc)?
- Are there EMT specific skills and knowledge, that individual EMT members should possess in addition to their general medical education and practical skills? Please specify.
- What standard procedures for selecting / recruiting EMT members should be developed and be in place prior to establishment of EMTs?
- What are the standard requirements for EMT staff training, retraining and continuous education? How the plan should be developed and are there any specific requirements (how often, knowledge-specific topics to be covered, etc.) to be considered?
- Are international exchange visits among EMTs practiced / introduced as part of the WHO standards? Could you please tell us how this is practiced, how often and what the benefits of such exchange visits?
- Could you please tell us more about EMT Coordination Cell, what are the functions and how it is important to be established?
- What are the standard requirements for EMT configuration, composition and structure (doctor/nurse ratio, quantity, number of teams etc.)?
- What incentives are envisaged to further motivate and maintain EMTs functional and what is the international practice in this regard?

Other questions

- How do you think, what experience is / should be required for the EMT workforce? What academic degree should be considered sufficient? How many years of relevant working experience should be considered sufficient? Why do you think so? In your opinion, is it feasible to achieve considering the country context? Why do you think so?
- How do you think how the background and experience of existing medical staff corresponds to the needs of EMTs? If yes, why do you think so? If no, what should be improved? How should it be

managed? Which entity should be responsible for it? Why do you think so? Do you see any obstacles in terms of mobilizing proper staff for EMTs? Please specify.

- What kind of EMT staff selection / recruitment procedures should be in place? what are the critically important criteria that should be part of the EMT recruitment process? What else? Why do you think so? Are there any other criteria, that could not attended / satisfied? Please specify.
- In your opinion, what should be the requirements for practice and qualification for EMT workforce? Who should determine them? On which basis should be those requirements developed?
- What trainings should be mandatory for the EMT workforce? Which entity should be responsible on development of these training modules / curricula? Who should be responsible on provision of these trainings? At what extent does the responsible entity have relevant knowledge to provide these trainings? Why do you think so? How often the trainings should be delivered (refreshment, transfer of new knowledge, etc.)
- How should the continuous medical education for the EMT workforce be maintained? Which educational/training tools should be applied? How should the periodicity for the continuous medical education activities be determined? Why do you think so?
- How should the periodical assessment of the EMTworkforce take place? What tools / instruments should be considered to make assessment effective? Which entity should be responsible for theassessment? Is there sufficient competence within the country to be able to provide quality assessment according to the internationally set standards? What periodicity should be determined on this purpose? Why do you think so? Which components should be assessed in order to maintain the sufficient quality of practice and knowledge, for EMTs' readiness for the health emergencies/disasters?
- What incentives, motivation mechanisms in your opinion can effectively increase EMT's motivation and why do you think so? What are established international practices in this regard? What are the mechanisms / incentives that could be considered in Georgia?
- Besides the qualification and experience, please provide your opinion regarding the EMT team configuration and structure for EMT type 1 (for both, mobile and fixed separately)? How the EMTs should be configured and structured?
- How do you think, should those trainings be already held to model the potential landslide situation in Vashlijvari district, Tbilisi, Georgia? Would it be helpful if the potential situation takes place? How do you think, would the knowledge we spoke above be relevant while flood of 13-14 June 2015, in Tbilisi, if EMTs were available at that moment?

- In your opinion, what stands for the multidisciplinary practice for the EMTs? How should it be integrated with other disciplines in order to provide smooth collaboration? Should the interdisciplinary teams participate in mutual trainings/modelling in order to achieve the most coordinated working capacity?
- Sudden-onset disasters (SODs) require immediate action from the EMTs. How do you think, how the timely availability of the teams can be managed?
- Deployment of Foreign Medical Teams (FMTs) during the SODs include number of bureaucratically issues. E.g. temporary medical licensing for the medical staff. How challenging can it be within the existing legislation/requirements in Georgia? Why do you think so? How can it be addressed in case of SODs and EMTs?
- Another important issue is customs clearance when the FMTs arrive. How flexible can the Georgian customs be for the timely arrangement of the customs service? What challenges do you see in this direction? How they can be addressed?
- Which particular entities will be / should be involved in overall coordination of EMTs and why their involvement / participations is important / critical in your opinion?

Part 2: Standard Operating Procedures (SOPs)
Question for focal points and WHO representatives

- Which SOPs according to the WHO standards are to be developed for establishment and operationalization of EMTs?
- "Standard Operating Procedures for Crisis"

Question for other stakeholders

- Which SOPs in your opinion need to be developed for establishment and operationalization of EMTs? What are the country specific needs in this regard?

Ask to all KIIs:

- Who should develop the SOPs (ask about multidisciplinary team, requirements/ recommendations for composition etc.)?
- What should be included/covered under the SOPs (main sections/sub-sections etc.)?
- What are the formal / practical steps and basic requirements to get approval (procedures, responsible entities /structures)?
- Based on other countries experiences, what time is required in general to get approval?
- Who is the eligible body / structure to issue the approval?
- How the response needs should be classified? Who should develop the criteria for the response needs in order to involve the relevant EMTs? Why do you think so?

Part 3. Logistical support and security procedures

- What are the minimum technical standards according to the WHO for EMT logistical support required on site to make teams operational and how this should be regulated (established, maintained and assessed)? Ask for water, power and lighting, food, waste disposal, sanitation, transport, communication etc.
- Do the standards leave room for flexibility or it should be strictly adhered in order to get approval for operationalization?
- What kind of security risk management system should be in place to ensure the EMTs operate in a safe environment and who is responsible for security risk management? What are the basic / standard requirements for countries in this regard?

Part 4. Equipment and consumables

- Which entity should develop the pre-defined list of equipment and consumables for EMT type 1 (outpatient emergency care) – for mobile and fixed separately? Why do you think so?
- Project envisages procurement of all necessary equipment/consumables by ASB . Which entity will / should take ownership / responsibility on procured items (equipment / consumables), its storage, maintenance / stock replenishment in a short as well as long-term period?
- What are the internationally established criteria ASB should follow / adhere while procuring necessary equipment / consumables? What would be your recommendations in this regard? Are there standard procedures / list for requirement that needs to be developed / adopted? Do you see any obstacles in this regard? What are the risks ASB should consider and manage?
    - How should be the quality of the procured equipment/consumables controlled? Who will be / should be the entity who should be responsible for quality control?
    - How do you think, how the EMTs' warehouse should be managed?
        - Which entity should be responsible for keeping and managing the EMTs' warehouse? Why do you think so?
        - Where should the warehouses be located? Should it be a centralized one or scattered through the whole country? How can you rationalize your position?

- Usually the disasters are sudden on-set, how do you think the amount of the consumables/equipment should be determined to be kept for the timely availability?

Part 5. Field hospital accessibility and rehabilitation space

- How should the requirements for physical accessibility of field hospitals be developed? Who should be responsible on it? Why?
- Who should develop/adapt the detailed SOP / guideline on the physical accessibility of the field hospitals for the EMTs? How these documents should be disseminated to the EMTs? Should the training be held in order to introduce to the teams? If yes, how do you think, in what form?
- Who should develop the detailed SOP / guideline on space requirements -? How these documents should be disseminated to the EMTs? Should the training be held in order to introduce to the teams? If yes, how do you think, in what form?

Part 6. Patient management

- Availability of detailed SOP / guideline on patient management pathway
  - Who should develop the detailed SOP / guideline on patient management pathway? How these documents should be disseminated to the EMTs? Should the training be held in order to acknowledge the teams with it? If yes, how do you think, in what form?
- Availability of detailed SOP / guideline on optimal care, discharge / referral and follow-up
  - Who should develop the detailed SOP / guideline on optimal care, discharge / referral and follow-up? How these documents should be disseminated to the EMTs? Should the training be held in order to acknowledge the teams with it? If yes, how do you think, in what form?

Part 7. Information management

- Availability of detailed SOP / guideline on information / records management
  - Who should develop the detailed SOP / guideline on information / records management? How these documents should be disseminated to the EMTs? Should the training be held in order to get familiar the teams with its content? If yes, how do you think, in what form?
  - How do you think, is the specific Health Information System (HIS) necessary to be developed for the health emergencies/disasters situations in order of proper management of records/information? Why do you think so?
- Data collection/reporting methods and management
  - Data collection/reporting during the emergencies is challenging. How do you think, what strategies should be applied to make this process more efficient, but less challenging? Please rationalize your statement.

Part 8. Health emergency response research

- Ethical standards for research
  - How do you think, which directions of health emergency response require further research? Why do you think so?
  - How should the ethical standards for the health emergency response research be followed?
- Collaboration
  - In your opinion, which institutions and agencies should the entities/persons undertaking the health emergency response research collaborate with? Do you think collaboration is essential during this research process? Why do you think so?
- Leadership
  - How do you think how the leadership should be distributed when the local and international EMTs are involved in disasters management? And in case the EMTs from another part of the country visit to help in disasters management?

- How should the roles be distributed? Should the single approach be applied for every case or determined per situation? What should be obstacles during distributing the roles and leadership? Why do you think so?

Part 9. Questions regarding policy implications and impact

- Policy-related obstacles
  - How important is establishing EMTs for the country in your opinion and why do you think so? How do you think, what are the benefits which can be brought by establishing/functioning of these teams for the country? What can't be done or may be done but not sufficiently while such teams don't exist?
  - What are the major problems which may the country face during establishing the teams? What are the country-specific risk factors hindering the process / threat effective functioning of the teams or their long-term sustainability? Why do you think so?
  - How do you think how realistic and feasible it is to adapt the internationally recognized certification standards considering our country context? If no, where do you see the issu/risk? What should consider the country to manage the process without obstacles? What are the major issues related to the large human, financial and time resources? Why do you think so?
  - Who are the major participants and stakeholders involved in the processes of establishment and following management/support of the EMTs? Engagement of which structures is critically important and how do you see distribution of roles, functions and responsibilities amongst these structures / stakeholders? (Ask about various ministries, state agencies, NGOs, medical unions, donors, business sector, etc.).
  - Is there a risk of overlapping the roles/functions at this stage (or the risk of incomplete coverage of any function / role) and if yes, please specify? What mechanism exists / should exist to provide effective coordination of the major actors and stakeholders? What risks do you see in it?
  - How do you think the existing legislative framework addresses the challenges associated with the emergencies/disaster management? Do the existing laws or other legislative acts have the gaps potentially hindering the execution of the proper management during the health emergency situations? If yes, please tell me in details, what are the issues? Do you have any examples?
  - Please tell us about the major documents available at the country level (Normative acts, legislative framework, reports, other basic documents, etc.), review/analysis of which can be helpful during this research, will help us in versatile assessment of the existing situation, comparing with international requirements and develop the specific recommendations?
  - How do you think what should be changed in the existing legislative framework to make it more flexible for managing the health emergencies/disasters? Why do you think so? How do you think, those changes are feasible in our reality? Why do you think so?
  - In your opinion what aspects in local legislation could potentially hinder smooth establishment / operationalization of EMTs in the country? Please list all and specify in sufficient details. How you think the mentioned issue could be addressed?
- Leadership commitment
  - What are the major supporting factors allowing in establishing the teams, promoting their following effective functioning and prognosing their long-term smooth maintenance? What other factors are such?
  - How do you think does the readiness and political commitment regarding creation and maintaining the EMTs exist at this moment? Why do you think so?
  - What challenges should we face in terms of leadership commitment? Please rationalize your position.

- Financial aspects
    - In your opinion, does the country has the financial basis / resources in order to create EMTs and maintain them in sustainable manner?
    - What financial challenges do you see in the process? How do you think they can be settled? Please rationalize your position.
- Monitoring and reporting
    - In your opinion which entities should develop EMTs' monitoring and reporting framework?
- Advocacy
    - How do you think, which entities should take responsibility to advocate the need of EMTs and their development? How should it be managed? Why do you think so?

Thank you for the participation!

KII guide for international and local KIs

In-depth Interview Guide for country stakeholders (Key Informants)

Greeting, presenting study goals and objectives, taking informed consent.

Preparing audio recording of the meeting: We ask for the permission to record the audio and explain the goal of using recording audio / online meeting.

Self-introducing of the respondent:

- Please introduce yourself.
- Which entity do you represent?
- What do you do? How long have you been engaged in this activity?
- What experience do you / your organization have in managing emergencies/health emergencies/disasters? What is the target of your activity?

Duration: 1-1.5 hours

- In your opinion, what kind of importance and benefits does EMT establishment have for any country? Why do you think so? Can you recall what was not done sufficiently before the EMT establishment? Can you specify the cases?
- How you do you think, what are the major factors in the countries that might obstacle the EMT establishment, functioning and sustainability? Why do you think so? What do you think about the hindrance in Armenia, what it might be?
- In your opinion, is it easy and feasible to adapt internationally recognized certification standards to the Armenian national context? If no, what can be the major obstacles? (ask about the obstacles about the human resources, time, finances, etc)
- Can you specify and recommend us the international documents and reports that might be interesting for this study and will help the research team to get better insight and elaborate the recommendations?
- How do you think, which organizations should be responsible for the elaboration of EMT monitoring and reporting framework?
- And which organization should be responsible for the advocacy about necessity and establishment of EMTs? How do you think, what are the best way to manage the advocacy? Why do you think so?

EMT workfoce, competences?

- What are the basic requirements for EMT members according to the WHO certification standards (skills, education, years in practice, field of operation, etc)?
- Are there EMT specific skills and knowledge, that individual EMT members should possess in addition to the general medical education and practical skills? Do you see any obstacles in the recruitment and mobilize stuff for EMT? Please specify.
- How do you think, what can be done in terms of EMT contract management not to create the contradictions between their major work and cause team demotivation? Are there any international experiences that are successful and can be applied? Can you share them?
- What are the practices for the motivation and encouragement of EMT members? Can you tell about your or any other countries experiences that you perceived as successful?
- What are the standard requirements for EMT staff training, retraining and continuous education? How should the plan be developed and are there any specific requirements (how often, knowledge-specific topics to be covered, etc.) to be considered?

- Can you recommend how frequently should EMT be engaged in international exchange visits and what kind of benefits this activity can have for team? How do you think which structure should be responsible for the training and evaluation of EMT members? Can you specify how the training and evaluation should be carried out? How can SOPs regulate this issue? What should be the main content of SOP that will regulate the training, retraining and evaluation of EMTs?

Logistics and coordination

- To speak about the experiences of your country, is it easy to mobilize the EMTs? What time does it take? What are the challenges connected to the mobilization of teams for the particular mission and that might prolong the process? Can you recall any other obstacles regarding the mobilization?
- During the SODs, the Foreign Medical Teams (FMT) face number of bureaucratic challenges, for instance, obtaining temporary medical licensing for medical staff. To what extent such obstacles are detrimental for the EMTs timely engagement? What are the typical bureaucratic challenges facing EMTs and what are the solutions for them? how can the bureaucratic challenges be handled during the SODs?
- What are the minimum technical standards according to the WHO for EMT logistical support required on site to make teams operational and how this should be regulated (established, maintained and assessed)? Ask for water, power and lighting, food, waste disposal, sanitation, transport, communication etc.
- How should be the pre-defined list of equipment and consumables from EMT Type 1 (outpatient emergency care) be created (for fixed and mobile separately)? Why do you think so? Is there any pre-defined list that is established and should be applied during the establishment? If yes, please specify and help us in accessing this list. If no, what would be your recommendations?
- Project envisages procurement of all necessary equipment/consumables by ASB. Which entity will / should take ownership / responsibility on procured items (equipment / consumables), its storage, maintenance / stock replenishment in a short as well as long-term period?
- What are the risks connected to the procurement of equipment and consumables which ASB should consider?
- In your opinion, how should be logistics managed at the direct place of SODs?
- Data collection/reporting during the emergencies is challenging. How do you think, what strategies and Health Information Systems should be applied to make this process more efficient, but less challenging? Please rationalize your statement.
- How do you think which agencies should be engaged in EMTs coordination? In your opinion, how important is the engagement of other agencies?
- How do you think how should the constant monitoring of quality should be carried out? Who should take responsibility over the quality monitoring? What would be recommendations in this regard?

Standard Operation Procedures (SOPs)

- WHO standards inform to create the SOPs regarding the every step of EMTs. What would be your recommendations, to which directions can SOPs be elaborated/developed? What should be the structure of SOPs? How detailed the SOPs can be?
- How should EMTs be informed about each SOPs? Should the trainings about SOPs be carried out?

Thank you for the participation!

Annex #3 – the list of KIs

The list of Key Informants interviewed in frames of Field Phase in Armenia

#	Name and surname	Position
1	Gabriel Tepelikyan	Head of Emergency Situations and Mobilization Preparation Division of the Ministry of Health of Armenia
2	Armen Melkonyan	Head of International Relations Department of the Ministry of Health of Armenia
3	Nune Israyelyan	Senior Instructor of Therapeutic-Preventative Section of Medical Department of the Ministry of Emergency Situations
4	Nune Dolyan	WHO Armenia
5	Florian Hauke	FAST TEAM ASB Germany
6	Veronika Wolf	WHO German EMT National Focal Point (RKI)
7	Oleg Storozhenko	WHO EURO
8	Gino Claes	Strategic Counselor Disaster Management Head B-FAST, EMT coordinator Belgium
9	Raido Paasma	Estonian EMT

Jevgenijs Golovcuks from ECDC refused the participation in the study.

The study aimed to engage the head of legal service of MoH of Armenia. Even though the interview was scheduled, the respondent (Anna Mkrtumyan) changed her mind and refused participation during the last days.

Annex #4

Clinical Care Standards for EMT type 1 mobile

N	Clinical care	Scope for EMT type 1 (mobile)	Documents	Training/education	Leadership	Coordination / Monitoring / Logistics / consumables requirements	Notes
1	Triage	Initial and field triage	1. Triage protocols 2. Mass Causality Management (MCM) Plan 1. Patient identification system for tracking	Triage protocols per event	Leader per shift, considering his/her training and experience	Establishment of single-entry point Safety / security	Interpreters should be available Cultural aspects should be considered
2	Assessment, resuscitation and stabilization	Basic resuscitation and stabilization	1. Protocols on resuscitation, transportation and care	Relevant documents		Laryngeal mask or endotracheal intubation	
3	Referral and transfer	Basic stabilization and referral	1. Protocols on patient referral and transfer 1. Standard form and system for patient referral and transfer 2. Written information on patient condition, treatment, transfer details	Patient referral and transfer protocols and procedures			
4	Ward management	N/A					
5	Wounds	Initial wound care	1. Specific clinical guidelines (21)	Relevant documents			

N	Clinical care	Scope for EMT type 1 (mobile)	Documents	Training/education	Leadership	Coordination / Monitoring / Logistics / consumables requirements	Notes
6	Burn	Burns first aid, Pain relief	1. Local and national protocols for burn care 2. Recommendations for burns care in mass casualty incidents (22)	Relevant documents		Establishment of appropriate referral pathways	
7	Fracture management	Basic fracture management	1. Management of Limb Injuries during disasters and conflicts (21)	Relevant documents		Referral to type 2 or 3 EMTs equivalent facility	
8	Spinal cord injuries	Assessment and transfer Early recognition Immobilization and appropriate care	1. Emergency medical teams: minimum technical standards and recommendations for rehabilitation (23)	Relevant documents		Informing MoH/EMCC using reporting system	
9	Communicable diseases	Screening for and identification		Relevant procedures		Provision of handwashing and sanitation facilities Infected water waste treatment Separation of PPE areas Rapid set-up tent for isolation PPE Functional linkages with existing and available public health resources ad capacities	

N	Clinical care	Scope for EMT type 1 (mobile)	Documents	Training/education	Leadership	Coordination / Monitoring / Logistics / consumables requirements	Notes
						Reporting using MDS or another pre-agreed format	
10	Noncommunicable diseases	Basic outpatient chronic disease care	1. Noncommunicable Diseases in Emergencies (24) 2. National Guidelines (when applicable)	Relevant documents		Minimum two weeks care for patients with NCDs Referral to higher level / specialized facilities	
11	Reproductive, maternal and newborn healthcare	Basic emergency obstetric and neonatal care / sexual and reproductive health	1. Minimum Technical Standards and Recommendations for Reproductive, Maternal, Newborn and Child Health care (25) 2. Relevant SOPs (including SGVB) 1. Document labor and care per national protocol 2. Provision of minimum birth notification	Relevant documents Awareness on Sexual and Gender-based Violence (SGVB)		24/7 readiness to admit women in labor Provision of parenteral antibiotics, uterotonics, eclampsia treatment, basic resuscitation Emergency contraception of victims of sexual assault PEP HIV, tetanus vaccine	
12	Child health	Basic outpatient pediatric care and stabilization Nutrition screening	1. Minimum Technical Standards and Recommendations for Reproductive, Maternal, Newborn and Child Health care (25)	Adaptive training for child health care		Equipment, consumables, enough essential newborn and pediatric pharmaceuticals for at least 14 days	

N	Clinical care	Scope for EMT type 1 (mobile)	Documents	Training/education	Leadership	Coordination / Monitoring / Logistics / consumables requirements	Notes
			1. Clinical documentation system for pediatric patients 2. Registration system and procedures for unaccompanied minors 3. Documentation and reporting system for unexplained injuries				
13	Analgesia and anesthesia	Local anesthesia and pain control	1. World Health Organization-World Federation of Societies of Anaesthesiologists (WHO-WFSA) International Standards for a Safe Practice of Anesthesia (26) 1. Patient documentation (history, physical examination, consent, expected progress, follow-up)	Relevant training / expertise		Procedural sedation is permissible if relevant expertise is present in team	
14	Intensive care	N/A					
15	Surgery and perioperative care	Minor procedures with local anesthesia	1. Surgical Safety Checklist (27) 2. Comprehensive clinical records	Training and licensing in every procedure they perform		Sterile environment for minor procedures Analgesia / local anesthesia	

N	Clinical care	Scope for EMT type 1 (mobile)	Documents	Training/education	Leadership	Coordination / Monitoring / Logistics / consumables requirements	Notes
			3. Consent 4. Surgical process records 5. Post-surgical recovery plan 1. Informed consent form 2. SOPs for patients who can't give consent and haven't relatives			Minimal movement in the area where procedures are performed Limited air turbulence Consumables for surgical procedures PPE for staff	
16	Malnutrition	Screening, initiation ambulatory treatment	1. Utilization of mid-upper arm circumference versus weight-for-height in nutritional rehabilitation programmes: a systematic review of evidence (28) 2. Management of severe acute malnutrition in infants and children (29) 3. Other relevant documents	Relevant documents		Limited amount of therapeutic food	
17	Palliative care	Initial palliative care with referral	1. Guidelines and internal procedures on palliative care	Palliative care, including pain and symptom control, mental health and psychosocial support			
18	Rehabilitation	Basic rehabilitation care	1. Minimum Technical Standards and				

N	Clinical care	Scope for EMT type 1 (mobile)	Documents	Training/education	Leadership	Coordination / Monitoring / Logistics / consumables requirements	Notes
			Recommendations for Rehabilitation (23)				
19	Mental health and psychosocial support	Assessment, psychosocial first aid, referral if indicated	1. MhGAP: Mental Health Gap Action Programme: scaling up care for mental, neurological, and substance use disorders (30) 1. Institutional policies on mental health 2. Processes and procedures for staff/volunteers' mental health			Adequate stock of psychotropic medicines (31)	
20	Blood transfusion services	N/A					
21	Laboratory services	Basic outpatient testing Rapid diagnostic tests	1. Clear guidance and procedures 2. Documented results 3. Laboratory waste management plan	Staff training, when laboratory technician isn't present in team		Endemic disease rapid diagnostic testing (RDT) Basic diagnostic tools (urine pregnancy test, urine dipstick, blood glucose, hemoglobin testing) Relevant temperature environment for tests and reagents	

N	Clinical care	Scope for EMT type 1 (mobile)	Documents	Training/education	Leadership	Coordination / Monitoring / Logistics / consumables requirements	Notes
22	Medical imaging and reporting	N/A		Relevant training of staff who don't usually dispense medicines			If performing ultrasound examination is possible within team competence, it's welcomed for triaging and better decision-making
23	Clinical pharmacy and consumables	Outpatient drug supply for declared capacity Tetanus prophylaxis	1. Formulary, according to WHO Model List of Essential Medicines (32) 2. Procedures according to Good Pharmacy Practice (33) 1. Documented process for dispensing 2. Documented process for prescription 3. Process to access information on medicines 4. Guidance notes on prescription (14)				Near-miss incidents reporting system
24	Sterilization	Basic steam autoclave or disposable material	1. Decontamination and reprocessing of medical devices for health-care facilities (34)	Training in routine practices		Basic steam autoclave or disposable materials Division of sterilization facility into areas with workflow from dirty to clean	

N	Clinical care	Scope for EMT type 1 (mobile)	Documents	Training/education	Leadership	Coordination / Monitoring / Logistics / consumables requirements	Notes
			1. Safe procedures for staff working in sterilization area 2. System for traceability and quality control, documentation and record keeping of all steps of the decontamination cycle 3. Manual cleaning procedure			Grey water management system	
25	Infection prevention and control (IPC)	Adequate IPC	1. Standard precautions in health care (35) 1. Plan for reporting and investigating cross infection and measures to prevent repetition 2. Procedure on transmission-based precautions by route of transmission	Relevant training on IPC activities and internal protocols	IPC focal point	PPP for staff working in key areas Plan layouts that minimize risk of cross contamination and patient flow to minimize exposure of high-risk patients and facilitate patient transport Choose staff clothing with respect to adequate cleaning possibilities and laundry services that can reach adequate temperatures Use materials and fabrics that are easy to clean	
26	Health promotion and community engagement	Application of Principles of Community Engagement (36)	1. Communications plan (37) 2. Integration IEC materials into daily operations 3. Media SOPs	Training on key elements of the communications plan and the soft skills			

N	Clinical care	Scope for EMT type 1 (mobile)	Documents	Training/education	Leadership	Coordination / Monitoring / Logistics / consumables requirements	Notes
27	Chemical, biological, radiological and nuclear (CBRN), toxicology and toxinology	Assessment, decontamination where possible, first aid and referral	1. Protocol on recognition and assessment of symptoms and signs of chemical, toxicological and toxin exposures and first aid 2. SOP on referral to relevant facility 3. National protocols 4. Specialized texts and resources available to staff			Relevant PPE Decontamination means	

Annex #5 The infrastructure management and logistical support to EMT

The clinical care technical standards for EMT according to the WHO Blue Book (2021)

- Communicable diseases
    - Type 1 teams often use isolation areas, using an additional smaller rapid set-up tent, with a basic design: separated donning (at entrance) and removal area (at exit) for PPE, handwashing facilities, infectious water waste treatment and separated sanitation facilities.
- Medical imaging and reporting
    - Although Type 1 teams are not required to provide any radiological investigations, if they have a clinical capability to use ultrasound, it can improve decision-making in acute trauma (and other presentations) and triaging of patients for transfer to higher levels of care.
- Sterilization
    - Basic steam autoclave or disposable material
- Pharmacy supply chain and medical stock management
    - EMTs should have a minimum of three-days stock supply of pharmaceuticals and medical consumables for national deployment and a minimum of 14 days for international, with a resupply system in place to ensure availability of pharmaceuticals and consumables throughout the deployment period.
    - Assign a dedicated space for pharmacy and storage of medical supplies with restricted access.
    - EMTs should have storage boxes appropriate for medical and pharmacy supplies and equipment, ensuring that these are clearly marked and protected from excess heat and moisture.
    - Provide oxygen supply by cylinders and/ or concentrators.

The operational support technical standards for EMT according to the WHO Blue Book (2021)

#		Requirements	
1	Power	• Single 2 kVA petrol generator for transport to clinic site 5–10 kVA for base camp needs • Ensure fuel and reserve for vehicles (mobile activity)	
2	Communication	• Unlocked local SIM cards for non-smart phones and smart phones Low earth orbiting Iridium type satellite phone for voice satellite broadband for data connectivity and voice at base camp	
3	Water supply	Team members "hub" 40–60 litres/per person per day (ppd) • Team members "field" 5 L/ppd • Outpatients 5 L/ppd • An additional 50 L potable water per day will provide for cleaning and sterilization if required	Total water requirements 1 team x 4 persons (p) = (4 p x 5 L/pd + 50 L) = 70 L/d = 70 litres per day plus 5l x 50 outpatients = 250 L per day 5 people at the hub 5 p x 60 L = 300 L per day Total 70 + 250 + 300 = 620 litres per day Total water treatment: Assume 12 hr working day = 620/12 = 51.66 litres per hour throughput required Total storage needs: At the "Hub": 620 x 3 (72 hours' storage) = 1860 L ≈ 2000 litres storage capacity For each field team: 70 + 250 L = 320 litres storage capacity
4	Hygiene	• Teams must ensure they have appropriate arrangements for adequate hygiene at the facility (meaning handwashing stations, handrub solution, alcohol-based solutions). • Minimum:	Team of 13 Handwashing stations - 3

		• One handrub solution at points of care. • Handwashing stations in communal areas and main entrance to the hospital facility. • Hand hygiene promotion Information Education and Communication (IEC) materials clearly visible and understandable at key places.	Mobile handwashing basin per mobile team - 1 Staff showers – 2
5	Environmental cleaning	• No reusable linens required; however, EMTs must have protocol for addressing soiled staff clothing. • Appropriate and well-maintained materials for cleaning (meaning detergent, mops, buckets, etc.) are available. • At least two spill kits per clinical area	
6	Waste management	• Type 1 mobile with 2 mobile teams need a technology with a minimum treatment capacity of 20 kg (every two days). • Each mobile team needs to ensure the capacity to contain and safely transport 42 litres of waste in sealed containers to the EMT base camp.	Each mobile team - 50 outpatients per day, 0.07 kg infectious waste per patient, maximum storage of infectious waste: two days (48 hours). Calculation: 50 patients x 0.07 kg/patient x 1.2 (safety margin) = 4.2 kg infectious waste per day two days of storage x 4.2 kg per day = 8.4 kg every two days Result: This Type 1 mobile with 2 mobile teams needs a technology with a minimum treatment capacity of 16.8 kg (every two days). The size of containers required for transporting waste from the mobile clinics to base operations: the average density of the uncompacted waste is 200 kg/m3 (8.4 kg x 1000 litres/200 kg = 42 litres, meaning team needs to ensure capacity to contain and safely transport 42 litres of waste in sealed containers

		Teams must be able to manage and collect and contain their own excreta waste for safe disposal (meaning portable toilet with plastic bag and absorbent granules).
		• Latrines
		  ▪ Team members 1 : 20 latrines gender separated Outpatients 1 : 50 latrines
		  ▪ Gender ratio, people with disability, child friendly should be considered.
		  ▪ 1 mobile toilet solution for field visits (for staff) per team;
		• Showers for staff at base operations
		  ▪ 2 showers separated by gender (for team of 13)
		• Faecal sludge management at EMT base camp via containment and onsite treatment if local structures are not able to assume the waste.
		• Grey water management at EMT base camp via grease trap plus infiltration or containment.
		  ▪ Total grey water At the EMT base camp: approx. 500 litres	

Annex #6. The infrastructure management and logistical support to EMTs

The list of inventory for mobile teams

	Components	Description
1	Tents	• **There should be tents for accommodation, sleeping, treatment area, storages, for pharmacy, fuel, consumables, isolation tent for infected patients** • **Armenia is expected to need about 10-12 tents for whole operation of their team.** • The tents of Mobile teams are smaller and portable than tents of fixed teams.
2	Stretchers	• **Team will need up to 30 stretchers.**
3	Sleeping bags	• There should be sleeping bags for team members and reserve bags also need to have. • Interestingly, some international teams ask the team members to bring their own sleeping bags due to the hygiene. • **There should be at least one sleeping bag per member and some reserves in case of damages.**
4	Lighting/electricity	Armenia will need the generators, lighting cables and LED lights. • The team needs generator; WHO standards suggest purchasing single 2 kVA petrol generator for transport to clinic site and 5–10 kVA for base camp needs; • International experience shows that generators should not be too have and they could be carried by 4-6 individuals in case of such necessity. • The team will need the various electricity cables. They need to have enough permeability so as not to overheat and cause fire. • The team will need the LED lights within and outside the tents. The final quantity of LED lights and electric cables is not calculated yet as the final configuration of EMT is not approved yet.
5	Water supply	WHO findings suggest that 40-60 litter of water will be necessary per member in mobile team. • The water supply requires two main inventories: water reservoirs and water treatment plant. • In case, Armenia decides to provide the purified water the ultrafiltration system can be used in this regard. The teams usually have small capacity ultrafiltration (500 or 1000 L per hour) and produce the clean water on a daily base. Such teams usually have separate reservoirs for raw and clean waters.

6	Hygiene	The team needs handwashing facility, showers and bio-toilets for staff and patients. The toilets and showers should be separated by gender. WHO standards suggest to have at least: • 3 handwashing stations for team of 13; • 2 showers for staff; • Mobile handwashing basin per mobile team – 1; • 2 toilets for staff at base of operations; • 2 toilets for the inpatients at base of operations; • 1 toilet for people with disabilities; • 1 mobile toilet solution for field visits (for staff) per team; Usually teams have separate tents or pavilions for the hygiene area. Noteworthy, this is minimal standard for EMT type 1. International experience shows that some teams have for example 4 showers on regular basis and can increase the number up to 8. Some of them separate showers for patients. In addition, WHO standards suggest to use latrines too though they are less applied by the international teams.
7	Waste management	**There should be containers with different capacities for medical waste, household waste and the mobile teams.** • According to the WHO Type 1 mobile with 2 mobile teams need a technology with a minimum treatment capacity of 20 kg (every two days). • Each mobile team needs to ensure the capacity to contain and safely transport 42 litres of waste in sealed containers to the EMT base camp. • International teams use incinerators for waste management (for example, Smart Ash with capacity of 20-25 liters). • WHO standards state that the waste needs to be processed in every 48 hours on maximum.
8	Pest and vector	• It is recommended the teams to have **mosquito nets** per tent.
9	Communication	• **Satellite phones;** • **Mobiles.**
10	Other inventory	• **Teams are mobile and they need to have a car for the relocation in the affected region;** • **Kitchen equipment;** • Some **furniture** for the resting, conference and other spaces at the base camps; • **Wash machine;** • **Up to 200 storage boxes**, preferable wooden or alu boxes, for storage of equipment, food, and other inventory; • **Jerry cans** need to be purchased for the fuel storage. In addition, it is recommended to have a separate area/space for

		the fuel storages and identify individuals who will have access to the storages, particularly, of fuel reserves; • **Fire extinguishers or/and smoke detectors** per camp; • **Pavilions** are used frequently by some teams for hygiene area (toilets, showers, storages, for placement of motor equipment etc.). It is recommended to have some equipment to setup pavilions for teams in case of necessity.

Annex #7 - SOPs

Standard Operation Procedures for EMT type 1 mobile elaborated and offered based on the qualitative study findings:

- SOPs on operational readiness
    - SOPs for warehouse management;
    - SOP for trainings, retraining and continuous education;
    - SOP for EMT volunteer recruitment and requirements;
    - SOP for volunteer pool management;
- SOP on EMT activation;
- SOP on EMT mobilization;
- SOP on EMT coordination mechanism;
- SOPs on clinical care
    - SOP on initial and field triage;
    - SOP on Mass Causality Management (MCM) Plan development;
    - SOP on basic assessment, resuscitation and stabilization;
    - SOP on patient transportation, referral and transfer;
    - SOP on Initial wound care;
    - SOP on burn care;
    - SOP on fracture management;
    - SOPs on spinal cord injuries;
    - SOP on communicable diseases;
    - SOP on non-communicable diseases;
    - SOPs on reproductive, maternal and newborn healthcare (including Sexual and Gender-based Violence (SGVB));
    - SOPs on child health and nutritional screening;
    - SOPs on Analgesia and anesthesia;
    - SOPs on Surgery and perioperative care (minor procedures within the scope);
    - SOP on malnutrition screening and management;
    - SOP on palliative care;
    - SOP on rehabilitation;
    - SOP on Mental health and psychosocial support (can be separately for staff and patients);
    - SOP on Laboratory services;
    - SOP on Clinical pharmacy and consumables;
    - SOP on Sterilization;
    - SOP on Infection prevention and control (IPC);
    - SOP on Health promotion and community engagement (including media SOPs);
    - SOPs on Chemical, biological, radiological and nuclear (CBRN), toxicology and toxinology;
    - SOP on emergency vaccination.

- SOP obtaining informed consent containing protocols how to treat patient when they cannot give consent and does not have relatives, accompanying persons;
- SOP on identification and management of victims of violence including home-based and sexual harassment;
- SOPs on logistical support
    - SOP on site assessment and planning;
    - SOP on power and fuel;
    - SOP on communication;
    - SOP on transportation and fleet;
    - SOP on food provision;
    - SOP on pharmacy supply chain and medical stock management (including cold chain);
    - SOP on addressing the oxygen needs;
    - SOP on donation management;
    - SOP on safety and security;
    - SOP on facility structure, environment and ventilation;
    - SOP on logistical mobilization;
    - SOP on demobilization;
    - SOP on water supply;
    - SOP on hygiene
    - SOP on sanitation;
    - SOP on environmental cleaning;
    - SOP for healthcare waste management;
    - SOP for vector and pest control;
    - SOP for dead body management;
- SOP on monitoring and reporting to measure the performance (MDS, field visits). SOP on monitoring and reporting can include more information about when exactly the team leader should send report to EMT CC and what is the main function of field visits; in case of latter, the instructions should be made what steps can evaluator make in case there will be deviations;
    - SOP on monitoring
    - SOP on reporting;
    - SOP on ethical standards during gathering and sharing the information;
- SOP on media which should consider the appropriate media and social media tools when communicating with target population of public health issues. In addition, it should include the record about the prioritization of local language when possible in order the messages to be consistent.