



European Modular Field Hospital



This project is co-funded
by the European Union

The EUMFH project

The European Union (EU) does not possess a capacity for long term complex medical assistance that can respond to requests made by either EU member states or from beyond. Whether this request relates to relief after a disaster or to the case of a temporary replacement of a medical facility.

For this reason the European Modular Field Hospital (EUMFH) project was initiated with the aim to explore how the medical capacity of the Union Civil Protection Mechanism can be improved and whether different member states (MS) of the EU can combine their expertise and build a common deployable Emergency Medical Team level 3 (EMT3). The project had a planned budget of approximately €1,000,000, which was co-funded 75% by the EU and 25% by the consortium members. The project ran from 1 January 2017 to 31 December 2018.

Present focus

A lot of effort goes into helping disaster affected areas. The focus is obviously more on the rescue in the first 72 hours and trauma care in the first couple of weeks. However, according to research, very soon after a disaster, i.e. an earthquake, the response needed requires a more elaborate approach (see Fig. 1).

Present approach

The medical needs, days and weeks after a disaster, exceed the capacity of what the collective EU or any individual nation has to offer. Therefore, substantial financial support is often given by the member state as more is required in order to return to an acceptable situation (see Fig. 2, 3).

Present EU EMT capacity*

4x EMT1 = Primary & Emergency care, (mobile) outpatient clinic

5x EMT2 = Emergency care, outpatient clinic & inpatient surgical trauma care facility

0x EMT3 = Emergency care, outpatient clinic & inpatient intensive & referral care facility

*according to WHO dated 1st December 2018

EMT1

- * primary and emergency care
- * 50-100 outpatients per day
- * daytime services
- * avg. 2-3 weeks

EMT2

- primary and emergency care
- surgical trauma care facility
- 100 outpatients, 20 inpatients per day
- 7 major surgical procedures
- 15 minor surgical procedures
- 24h inpatients and surgical services
- avg. 3-4 weeks

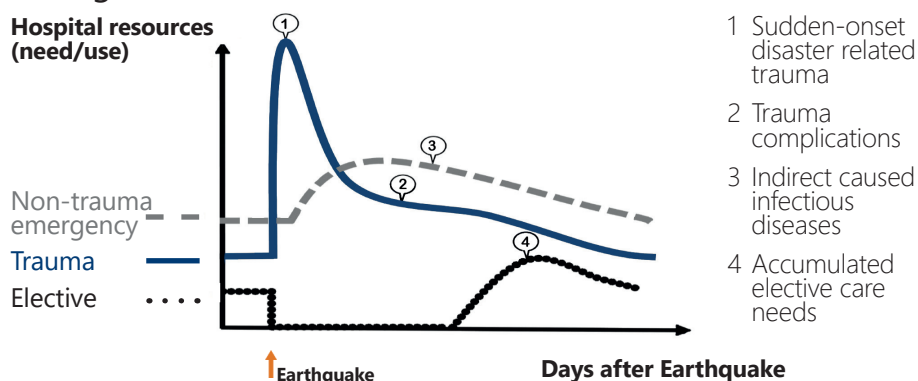


Fig. 1: Conceptual model for the variation over time of need/use of hospital resources for non-trauma emergencies, trauma complications and elective surgery before and following a sudden onset disaster. (Von Schreeb et al., Prehosp Disaster Med 2008 Mar-Apr; 23 (2): 144-51)

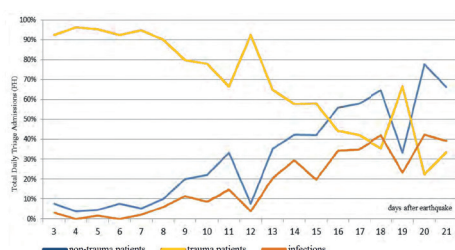


Figure 2

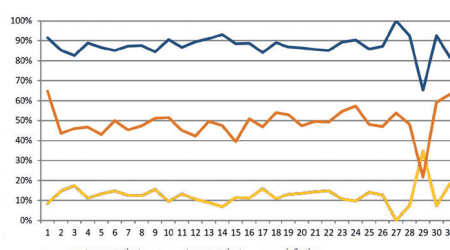


Figure 3

Fig. 2 (left): Evolution of trauma vs. non-trauma patients, and infectious cases over time (B-FAST Haiti 2010)

Fig. 3 (right): Evolution of trauma vs. non-trauma patients, and infectious cases over time (MdM Belgium 2015)

From EUMFH to EMT^{EU}

On the basis of a joint EU effort an EMT3 can be developed and will be able to effectively respond to the medical issues any affected community requires in the weeks and months after a disaster. The approach that this project has worked on, is modular, scalable, and flexible.

The EUMFH approach

According to the WHO, there are only two EMT3s in the world, none of which is European. However, even if a single EU MS would be able to provide an EMT3, it would be extremely difficult - if not impossible - for this MS to singlehandedly provide enough personnel much less for several rotations. Cost and availability of personnel is therefore a major issue. Hospitals, clinics, ambulance services, and other medical facilities are just not able to release their staff for long periods, if at all.

However, collectively, with a staff provided by different EU countries and one set of equipment warehoused at one site within Europe, it is possible to develop and staff a European EMT3 = EUMFH. And that is how #EUSavesLives in the coming years: **united!**

The EUMFH capacity

- * primary and emergency care
- * surgical trauma care facility
- * intensive care facility
- * referral care facility
- * 100 outpatients & 62 inpatients per day
- * 15 major surgical procedures
- * 30 minor surgical procedures
- * 4 intensive care beds
- * 24/7 inpatients and surgical services
- * > 4 weeks



The added value of an EUMFH

A collective approach creates a platform for understanding, cooperation, and unity

Unique feature

This will be a true European joint venture where every MS can be individually represented.

The first

There are only two WHO certified EMT3s in the world: Israel and China. The fact that the EU does not have an EMT3 is no argument for not needing one. On the contrary: It is our duty to be prepared for every possible incident and not only for those that have already occurred in the past. For the benefit of EU citizens and the world.

Support

After a disaster the common approach is to support the affected country with knowledge, expertise, equipment, resources, and capacity building programs. If the previous is insufficient or absent within the EU community, financial aid is offered to compensate. The EUMFH will be able to (partially) replace the offered aid given by the individual MS.

Proprietary technology

Due to the collective approach we can offer better training, a modular approach, and the foundation

to develop and accept more specialised modules. Consequently, this will increase the deployability of the EMT3 considerably.

Unity

This new found unity will have its own EU identity and provide us with some extra visibility.

For example, since the EU MODEX exercise in Romania in October 2018, the EUMFH team has been fondly dubbed and widely accepted as:

"The Blue Team" or "EMT^{EU}"

The WHO strongly supports the project to pool resources into a common European level type 3 EMT. Regional collaboration makes all the more sense for this project as it will allow for a longer-term deployment timeframe of the EMT as capacities, including human resources, will be able to tap into a much larger pool. So far, there is no type 3 EMT in Europe that has stated its willingness to be deployed internationally, and the EU would step in to fill an identified gap.

What, if not an EUMFH?

Disaster affected countries will initially try to take care of their casualties themselves. If this is not possible they will send their nationals to neighbouring countries or further, if necessary. However, the place of treatment has some serious repercussions for the victims.

Within a country

Pro: People remain close to home. This means easy transferral to their homes and could also yield psychological advantages.

Con: The country may soon reach a saturation point. This could be due to diminishing resources, arising medical issues, cascade effect after the disaster, or a combination of these.

The **EUMFH** is deployed as replacement for a referral hospital or tailored solution to specific needs. It starts as EU EMT and local staff is incorporated from the beginning if the situation allows. Thus EU staff can be phased out until the unit can be handed over to national authorities.

Neighbours

Pro: If the neighbouring country was not affected (directly or indirectly) by the disaster, this is a quick and accessible solution.

Con: The relationship between the neighbours needs to be sound. There may be different medical and cultural approaches. However, this is a short term solution for a limited number of patients.

If the **EUMFH** is deployed to the affected country, then the casualties remain close to home and the medical approach will abide to the host nation's laws, regulations, and customs. Also, the solution could remain in operation for a longer period of time.

EMT1 & EMT2

Pro: Ability to deploy close to the affected areas. This could have a positive impact on the commencement of measures.

Con: Inability to cater to e.g. longterm medical issues or complex medical cases. Such EMTs can often only respond adequately for as long as they are self sufficient, in general not longer than a month.

The **EUMFH** can replace a regular community hospital for a number of months, subsequently, catering to nearly every facet of medical care, i.e. emergency, primary, secondary, and tertiary care (partially). Furthermore, it can provide public health and information.



All for one and one for all

An EU EMT3 is a necessity for a number of reasons. Besides being able to help those in need, it will create a platform for our professionals to exchange views and learn skills they would not obtain otherwise. Above all, we gain the experience of working in a disaster affected environment.

Timeline

It is clear that a European Emergency Medical Team can be developed. The next step is to actually accomplish this with the financial and organisational help of the European Commission and to make it accessible to all MS. It was not the objective of this project to provide a precise calculation of an EMT3. However, an estimate was made based on the collective experience and acquired information from the EUMFH advisors and other EMTs.

Procurement

+/- €8,000,000

Procurement of EMT3 hardware and software

+/- €2,500,000

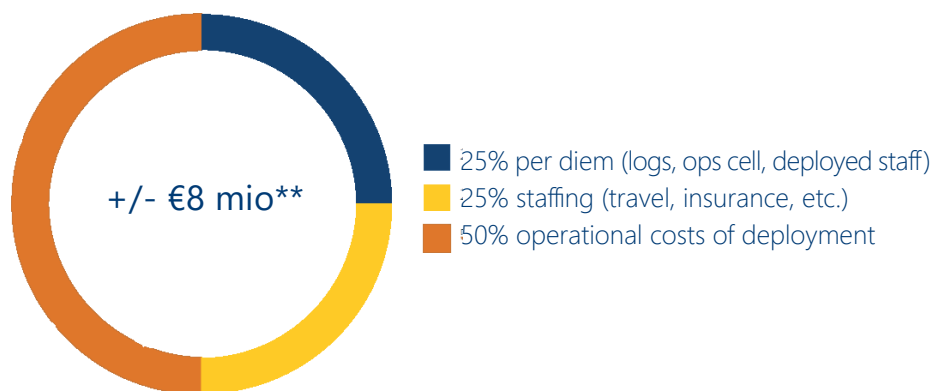
2nd EMT3 for training and spare parts

Running costs per annum

+/- €7,500,000

Training, exercise, warehousing, maintenance, restock, and management

Deployment (60 days)*



130 staff = +/- 10,000 working days

* It is assumed that the costs of deployment will reduce considerably after the first two months due to the gradual incorporation of local staff and host nation capabilities.

** Estimate based on the sort of hospital required, number of EU staff vs local staff hired, transport, etc.

Next steps

In the past two years, guidelines on governance, healthcare, logistics, and education have been developed, networks have expanded, new cooperations have been built, and the foundation for a methodology for a common Electronic Patient Record (EPR) system has been laid down. In addition, approximately 80 people of eight EMT backgrounds (logisticians, nurses, doctors, management, etc) have received training to work in an EMT3 environment.

The training concept was tested during the EU ModEX in Romania between 13-18 October 2018 in which we sent our trained staff to work in an actual EMT3 (Israel Defense Forces Field Hospital (IDFFH)). This training confirmed our approach and the enthusiasm of the EMT community towards our approach exceeded our expectations.

In December 2018 these guidelines were finalised and presented to the EU Commission.

It is the ambition of the consortium to follow-up on this project and develop a European EMT3 within the next two years:

EUMFH

The EMT Operating System (EOS)

To address EMT challenges such as structured documentation of patient and treatment data as well as providing intelligence information for optimal EUMFH command decisions the Emergency Medical Team Operating System (EOS), an Electronic Patient Record and an electronic hospital command system for EMTs has been developed within the EUMFH project.

EOS will meet the specific requirements of EMT levels 1 to 3 in disaster relief. The system will be provided for free for noncommercial use and for humanitarian stakeholders.



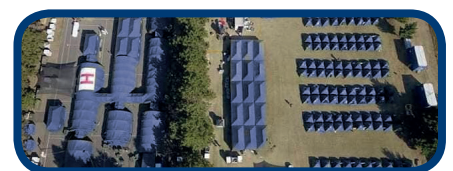
EUMFH Impressions



A 3D model of the EUMFH EMT3



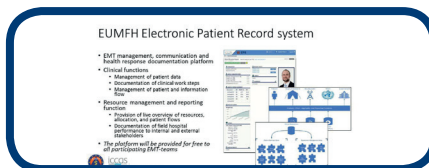
EUMFH triage tent @EU MODEX exercise in Bucharest, Romania



Artistic rendering of aerial view of an EMT3 @EU MODEX



The EUMFH participating in the largest medical EU MODEX ever



EUMFH presented at the WHO Regional Conference in Brussels, Belgium



Our highly motivated EUMFH Team after 4 long days of EU MODEX in Romania



EU Commissioner Stylianides examines the EUMFH 3D printed model



EU Commissioner Stylianides meets EUMFH management team members in Brussels, Belgium



EUMFH - Steering Committee meeting in Rome, Italy

The EUMFH consortium

A voluntary group of EMT professionals came together in 2013 with the aim to create some clarity between what was then known as Advanced Medical Posts (AMP) and Foreign Medical Teams (FMT) but also to identify gaps in the present capabilities. It was then that this group concluded that the EU could not provide an EMT3 unless they worked together. Subsequently, a number of members from this group initiated the EUMFH project, led by the Italian ICPD, and took it upon themselves to develop and, if successful, manage this future European EMT3.

The present consortium is comprised of the following partners (in alphabetical order):

Belgium (MoH), Denmark (DEMA), Estonia (EHB), France (DGSCGC), Germany (Johanniter & ICCAS), Italy (ICPD), Romania (DSU) & Slovakia (ASSR).



TERVISEAMET



THE
JOHANNITER



PROTEZIONE CIVILE
Presidenza del Consiglio dei Ministri
Dipartimento della Protezione Civile



EUMFH Steering Committee

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Emergency Medical Team EU



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