



Brussels, 7.1.2020
SWD(2020) 3 final

COMMISSION STAFF WORKING DOCUMENT

Preparing for mass burn casualty incidents

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Glossary

Burn bed Burn care treatment capacity

ICU burn bed

Unrestricted intensive care capacity in an acute burn care unit. The unit should be equipped and designed to provide care for a major burn patient. This means high room temperature, climate control, total isolation facilities, adequate patient surveillance, and intensive care monitoring facilities. ICU burn treatment capacity includes designated care by a multidisciplinary burn team, including burn surgeons, intensivists/anaesthesiologists, and nurses.

Medium care burn bed

Treatment capacity in an acute burn care unit provided by a multidisciplinary burn team, including burn surgeons, intensivists/anaesthesiologists, and nurses. The unit should be equipped and designed to provide care for a major burn patient. This means high room temperature, climate control, total isolation facilities, and adequate patient surveillance.

Surgical ward bed

Burn treatment capacity in a surgical ward of a burn centre hospital, close to, but not necessarily in, an acute burn care unit.

CECIS Common Emergency Communication and Information System, managed by the ERCC under the Union Civil Protection Mechanism

EBA European Burns Association

ERCC Emergency Response Coordination Centre in the European Commission

MEDEVAC Medical evacuation

UCPM Union Civil Protection Mechanism

1. Background

The European Union Civil Protection Mechanism (UCPM), established in 2001 to protect people, the environment and property against natural and manmade disasters, fosters cooperation among national civil protection authorities across Europe ⁽¹⁾.

The mechanism's Emergency Response Coordination Centre (ERCC) provides a 24/7 service coordinating the delivery of civil protection assistance to disaster-stricken countries. Any country in the world can ask the UCPM for help.

Another element of the UCPM, the European Civil Protection Pool, was set up in 2014 to further improve European emergency preparedness. It brings together a range of relief teams, experts and equipment, which countries in the UCPM make available and keep ready for use in EU civil protection missions all over the world. This enables the EU to respond to disasters more quickly and effectively, and better plan and coordinate its operations.

The European Medical Corps ⁽²⁾, established as part of the European Civil Protection Pool in the aftermath of the Ebola epidemic in West Africa (2014-2016), aims to strengthen the EU's capacity to respond to emergencies with health consequences beyond the coping capacities of affected countries alone, both in and outside the EU.

After the launch of the European Medical Corps, the issue of mass burn casualty incidents was one of the first to be taken up. A coordinated EU-level approach was considered particularly appropriate because: (a) burn care is time-, labour- and resource-intensive, (b) expertise is limited to a few centres, each with limited capacity, and (c) a rapid response is critical.

A first exploratory meeting with UCPM countries took place in May 2016. It was decided that UCPM tools already available should be used to help countries prepare themselves for mass burn casualty incidents, and that a complementary response at EU-level should be planned for. Following the meeting, the Commission pursued the issue with strong support in particular from Romania and Norway, in close collaboration with the European Burns Association (EBA), and in consultation with the technical working group on burns set up as part of the Emergency Medical Team initiative of the World Health Organisation.

The EBA has provided some key guidance to better prepare individual Member States and the EU as a whole for mass burn casualty incidents, including the technical-medical basis and references for this document, as well as for training for UCPM burn assessment teams.

2. Objective and scope of UCPM assistance

If a country is unable to deal with a mass burn casualty incident by itself, it can ask the UCPM for support with secondary patient assessments and the medical evacuation of selected patients for treatment in other countries.

¹ Decision No 1313/2013/EU of the European Parliament and of the Council of 17 December 2013 on a Union Civil Protection Mechanism, <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1401179579415&uri=CELEX:32013D1313>.

² See Article 1 of Commission Implementing Decision 2018/142, <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32018D0142&from=EN>.

During the patients' long-term specialised care abroad, the UCPM would no longer be involved and other (EU) regulations would apply.

This document focuses on activities linked to activating the UCPM – ensuring access to assessment by burn specialists, access to medical evacuation capacities, and access to burn care in UCPM countries.

It identifies the key stakeholders in cases where a European response to a mass burn casualty incident is needed, as well as the core principles on which such a response is based. It then goes into the details of how the response can be triggered and what it would entail.

3. Who's involved?

3.1 UCPM countries

A European response to a mass burn casualty incident involves different authorities and people from UCPM countries ⁽³⁾.

The **civil protection authorities** of the affected country send a formal request for assistance to the ERCC. They do so in close coordination with the affected country's health and other authorities as they see fit (the Foreign Affairs Ministry for example). When the UCPM is activated, the civil protection authorities of the affected country mobilise resources to (a) host burn assessment teams, and/or (b) evacuate selected patients to other UCPM countries.

The **health authorities** are responsible for coordinating communication with the hospitals that received patients following primary triage and dispatch in the affected country, and with the burn centres that will receive patients from the specialised in-hospital triage and dispatch in the receiving countries. The health authorities also play an essential role in coordinating the safe transfer of patient clinical data and ensuring the treatment costs of the countries receiving patients are covered.

The **burn centres and burn specialists** in all countries involved will ensure patients receive care that reaches the required standard.

3.2 European Burns Association

The European Burns Association (EBA) ⁽⁴⁾, founded in 1981, is a non-profit organisation that aims to encourage cooperation in the field of burn care throughout Europe. Inspired by the American Burn Association, it provides a forum for medical specialists, researchers, other professionals in fields related to medicine, and other people interested in the subject, to discuss burn prevention, treatment and research, disseminating knowledge and expertise throughout Europe. The EBA publishes and updates the European clinical practice guidelines for burn care. [1]

One of the EBA's key activities is the verification of burn centres, to ascertain the resources required to ensure optimal care for burn patients, from the time of injury to rehabilitation. In the absence of

³ UCPM countries are the EU Member States, plus Iceland, Norway, Serbia, North Macedonia, Montenegro and Turkey.

⁴ <https://www.euroburn.org/>

agreed governmental standards for burn care at EU-level, the EBA's burn centre verification serves as a reference point, guaranteeing a certain standard of care.

4. Core principles

Before going into detail about the response to a mass burn casualty incident, it is important to set out some of the key features of such a response.

- ⇒ **Efficiency and timeliness** are crucial. This means strong national preparedness, complemented by UCPM planning. The efficiency of the EU-level response relies heavily on the existence of **a strong national preparedness plan** (see Annex 1). Both the national and the EU-level responses should be easy and quick to trigger, with no time wasted on burdensome administration. Some UCPM countries may be part of regional agreements. These need to be taken into account when asking the EU for help.
- ⇒ The European response involves the **secondary assessment and dispatch** of patients to the appropriate treatment facilities. Experience has shown that primary triage is often unreliable and the primary distribution of patients often chaotic. [2-5] Given the time needed to deploy specialised burns assessment teams, using them for primary triage is not realistic. The primary transfer of patients should therefore take place in accordance with the national plan; European assistance focuses on secondary follow-up.
- ⇒ **Specialised burn assessment teams** are deployed as soon as possible (see Annexes 2 and 3). They take their instructions from national competent authorities and support them. Their role is to: 1) ensure secondary assessment and triage, 2) determine the required level of patient care, and 3) determine the level of care required during patient transfer to ensure secure transfer conditions. [6]

5. Responding to mass burn casualty incidents using the UCPM

5.1 Deciding to activate the UCPM

The decision to request assistance – to activate the UCPM – is made by the competent national authorities of the affected country. It must be made as soon as possible, to avoid losing precious time. If needed, a patient should ideally be internationally referred for treatment 48-96 hours after the burn incident occurred. [7]

Each UCPM country needs to determine its own criteria for when to request assistance from the UCPM. Each country's national preparedness plans should set out these criteria. They may include:

- the threshold at which the national capacity to treat severely burned patients is being exceeded;
- the availability (and triggering) of a regional response plan, in the form of an existing arrangement between a limited number of countries in the same region.

The affected country can activate the UCPM by sending a request for assistance to the ERCC. The request may include one or both of the following:

- (a) the deployment of specialised burn assessment teams (see Annexes 2 and 3);
- (b) the medical evacuation of selected patients to appropriate treatment facilities in other UCPM countries (Annex 4).

The ERCC will confirm the availability of burn beds in burn centres in other UCPM countries, by liaising with the ERCC national contact points. All countries offering burn beds must indicate whether their burn centre has been given an internationally recognised quality label and specify which one (EBA verification for example).

In parallel, as soon as the decision to activate the UCPM is taken, the health authorities of the affected country must decide how to cover the cost of long-term burn care in the country/countries providing treatment (see section 5.6 below). Close coordination between the national civil protection and health authorities in question is crucial for ensuring an efficient UCPM response.

5.2 Deployment of burn assessment teams

The rapid mobilisation and deployment of burn assessment teams is crucial for the secondary assessment of patients, i.e. the assessment at the health facility to which the patients have been referred from the incident site (see Annex 6).

The burn assessment teams need to be able to carry out their assessment transparently and independently, using standardised tools, without any external (such as political) pressure.

To request and offer the assistance of burn assessment teams under the UCPM, the civil protection authorities of the affected country and the other UCPM countries should follow the appropriate procedures (Annexes 4 and 5).

The ERCC aims to only deploy nominated experts who fulfil the requirements in the burn assessment team profiles (Annex 3).

Burn assessment teams may be deployed nationally and in international emergency response operations. Ideally, UCPM countries will have developed, trained and committed burn assessment teams to the European Civil Protection Pool in advance.

5.3 Prioritising patients for specialised care and secondary transfer

Even with a sound response plan, the number of burn beds available in burn centres is limited, as is the capacity (resources and teams) to transport patients to these centres. The EBA has developed guidelines for the triage and selection of patients for international transfer (see Annex 7).

An electronic tool to facilitate the sharing of aggregated assessment data collected on site, in line with the General Data Protection Regulation, would be useful.

5.4 Medical evacuation

The affected country's civil protection authorities request the medical evacuation of burn patients as part of a UCPM activation, following the standard procedures (Annexes 4 and 5). The ERCC supports the affected country in transferring patients to the appropriate burn centres in receiving countries. The optimal timeframe for evacuation is within 48-96 hours of the incident's occurring.

The risks involved in transporting severely burned patients must be taken into account. Specific expertise in providing appropriate care during transfer is essential for patient survival and recovery. [8, 9] The EBA provides technical guidelines on medical evacuation (see Annex 8). Where possible, different members of the same family should be transferred to the same facility.

The authorities of the affected country remain primarily responsible for the patients to be transferred until they are handed over to the medical evacuation team. This means that these authorities make the final decision on whether to follow the burn assessment teams' recommendations. They are also responsible for ensuring the safe transfer of the relevant clinical patient data, in accordance with the General Data Protection Regulation.

5.5 Selection of burn centres

It is important to guarantee a certain standard of care in all burn centres that may be involved in the response to a mass burn casualty incident under the UCPM. A common reference standard/ quality mark across the different burn centres – such as the EBA one – seems best suited to this purpose. It instils confidence among the stakeholders involved, something purely national standards cannot do. UCPM countries are therefore invited to consider having their burn centres verified by an internationally recognised burns organisation. This involves an assessment of the resources a burn centre requires to ensure optimal care for burn patients, from the time of injury to rehabilitation. The ERCC supports the selection of verified burn centres for the referral of patients under the UCPM.

5.6 Healthcare in referral burn centres

Burn centres receiving patients from the incident-affected country should also receive the relevant clinical patient data, in particular the burn assessment team's assessment data. The data should be shared securely, in accordance with the General Data Protection Regulation ⁽⁵⁾. Secure ways of reporting on the clinical progress of patients being treated in other countries to the treating physician(s) in the patients' home country also need to be considered.

Another key aspect of transferring patients to burn centres in other countries is covering the costs of long-term burn care. The Social Security Coordination Regulation ⁽⁶⁾ applies to EU and EEA countries. However, this regulation requires prior authorisation for the provision of healthcare in another country. This requires the competent authority of the affected country to commit itself — before the care is provided — to ensuring that the costs are reimbursed according to the tariffs of the treatment-providing country.

Given the particular circumstances of a mass burn casualty incident, and the limited amount of time within which patients should be medically evacuated, the matter of prior authorisation for this type of emergency is being looked into.

⁵ For more information on the General Data Protection Regulation: https://ec.europa.eu/info/law/law-topic/data-protection/reform_en.

⁶ Regulation (EC) No 883/2004: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3Ac10521>; Implementing Regulation (EC) No 987/2009: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32009R0987>.

5.7 End of response

From a civil protection and UCPM activation perspective, and in coordination with the affected country, the response ends when: 1) the burn assessment teams have finalised their mission, and/or 2) all selected patients have been evacuated and the means of transport used to evacuate them have been brought back to their home country. In accordance with UCPM procedure, the Commission organises a lessons learned exercise after the end of each response.

From a healthcare perspective, the response ends when the last burn victim has returned to his/her country and all costs have been reimbursed.

6. Other considerations

While not directly within the scope of current UCPM planning, a number of other considerations need to be addressed in the case of a mass burn casualty incident. These include the following:

- In cases of associated trauma, priority goes to the most life-threatening conditions, following the A B C D E (airways, breathing, circulation, disability, exposure) principle. Burns only become a priority after A B C D are stabilised. The transfer of patients with associated trauma needs to ensure the continuity of multidisciplinary trauma and burn care.
- With regard to crisis communication and relations with the media, national authorities need to communicate in a timely and transparent way about the incident and its consequences.

7. References

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8. Annexes

8.1 Annex 1. Minimal elements of a national preparedness plan

Planning at EU-level for mass burn casualty incidents is complementary to national preparedness plans, and both should function in a coordinated manner.

A national preparedness plan for mass burn casualty incidents may be part of a general plan, or it may be a separate burns plan. Certain core elements, which UCPM countries may find useful to cover in a national preparedness plan for mass burn casualty incidents, are provided below. ⁽⁷⁾

Staged response

A national preparedness plan for mass burn casualty incidents typically revolves around a staged response. For this reason, it:

- defines the different levels of activation – e.g. local, regional, national and international – together with the activation procedures and corresponding resources to be mobilised;
- includes procedures to request, receive and integrate international assistance.

Burn care capacity and thresholds

The total national burn care capacity is quantified in terms of burn beds, distinguishing between:

- 1) adult and paediatric treatment capability,
- 2) ICU / medium care / surgical capability,
- 3) burn care only or combined burn and trauma treatment capability.

Saturation thresholds are defined as activation triggers for the different response levels in a national preparedness plan. They are linked to:

- the type of incident, e.g. fire in a building, industrial disaster, terrorist attack;
- the number of available burn beds at each response level;
- the possibility to establish a surge capacity at each response level, i.e. a temporary increase in local treatment capacity.

National mass burns coordination cell

A national mass burns coordination cell (or similar coordinating entity) is an important part of a national plan, to carry out the following tasks:

- ensure that real-time information is provided on immediately available burn beds, as well as on second wave burn beds ⁽⁸⁾, in all national burn centres. This requires direct, 24/7 contact between the coordination cell and the burn centres.
- alert and mobilise the healthcare professionals qualified to perform specialised in-hospital triage of burn patients, nationally or as part of an international response. This means having a

⁷ See EBA guidelines for national preparedness plans: <https://www.euroburn.org/>

⁸ Extra burn beds that can be made available in a short time (a few hours).

roster of qualified burn assessment team members, along with a tested process to mobilise and deploy these teams within 24h.

According to the national set-up, the national mass burns coordination cell may be permanently active, collecting daily updates on the availability of burn beds, or it may be activated when needed.

Specialised in-hospital triage and patient referrals

In the case of mass burn casualty incidents, most burn patients are initially admitted to non-specialised healthcare facilities. They will require specialised in-hospital triage, followed by referral to the most appropriate treatment facilities. For this reason, a national preparedness plan should include the following:

- National specialised burn assessment teams, to perform specialised in-hospital triage. For efficiency and quality, these national teams may have similar qualifications and be of similar composition to the burn assessment teams mentioned in this document, and work according to the same principles, using the same tools (e.g. the burn patient assessment sheet).
- Communication tools and processes, ensuring optimal patient dispatch and timely data sharing. Clear roles and responsibilities regarding the decision on the final dispatch of patients need to be defined.

Patient transfers

A national preparedness plan may include appropriate provisions for timely secondary patient transfers from one treatment centre to another in the same country, whether by ground or by air. The EBA guidelines on transporting burn patients also apply in such cases.

Linking national and EU-level planning

Linking the national preparedness plan to UCPM planning requires the following:

- An easy, direct, 24/7 link between the national mass burns coordination cell and the national contact point for the ERCC (the civil protection authorities).
- A roster of healthcare professionals qualified to be part of European burn assessment teams, in accordance with the profiles outlined in Annex 3.

Training and evaluation

The national preparedness plan should be tested and exercised regularly, and training on the plan provided, with the possibility to make the necessary adjustments as recommended.

8.2 Annex 2. Standard Terms of Reference for Burn Assessment Team(s)

This annex provides standard terms of reference, which can be adapted to the context in question, in coordination and agreement with the local authorities.

8.2.1 Scope of a burn assessment team

A burn assessment team is a team of specialised burn care experts. The team can be rapidly mobilised in order to provide the necessary expertise for determining the most appropriate care for severely burned patients.

One or several burn assessment teams will be deployed as soon as possible after the occurrence of a mass burn casualty incident, to carry out in-hospital secondary assessment and triage, when the patients have been transported from the incident site to the initial treatment facility.

8.2.2 Burn assessment team objectives

The overall objective of the burn assessment team is to help healthcare authorities respond to an incident with severely burned patients, by providing highly specialised burn care expertise.

On arriving at the initial treatment facility, the specific objectives of the burn assessment team, in collaboration with the local healthcare providers, are the following:

- To provide a specialised assessment of the burn patients at the treatment facility that first received them directly from the incident site. The assessment requires the team's active involvement in the dressing changes under sedation. This requires the local medical team to ensure optimal conditions for this purpose.
- Based on this clinical contact, to perform the secondary medical triage, providing recommendations 1) on the level of treatment needed, 2) on the patient's fitness for transport, 3) on the patient's priority for international referral for treatment, and 4) on the care required *en route*.
- To assist local authorities in the final selection of patients for international referral, i.e. medical evacuation and treatment in UCPM countries.
- To assess any needs for further assistance with regard to the continued local care of the burn patients from the incident in question, such as the need for medication, equipment, etc.
- To closely coordinate all burn assessment team activities with the local and national authorities of the affected country, with the ERCC, and with others involved.

8.2.3 Timeframe and location

The duration of a burn assessment team deployment is anticipated to be less than 1 week, starting immediately/as soon as possible after the time of the incident and the occurrence of the burn injuries. It is estimated that a burn assessment team can assess roughly 20-30 burn patients in 24 hours.

Since the medical evacuation of burn patients is best performed 48-96 hours after the incident, the burn assessment teams should aim to, and be enabled to, finalise their assessment and triage within the first 72 hours.

The burn assessment teams will perform their tasks in the treatment facilities where the patients are initially hospitalised. The local authorities may help transport burn assessment teams between the

treatment facilities involved, so they can assess all patients in the shortest possible time. Depending on the context, security clearance may be needed.

8.2.4 Deliverables and reporting

Under the overall guidance of the burn assessment team leader, the team will:

- Complete the standardised assessment form (Annex 5) for each burn patient, and make them available to the local health authorities and the referral burn centres, in a selective and secure manner.
- Prepare a summary of the standardised assessments for the local health authorities, specifying the number of patients in need of international medical evacuation, and the level of priority.
- Provide specialised advice on further optimal care of unevacuated patients and their corresponding needs in the affected country, such as the required level of care, the possible relocation of patients, the need for allografts, and any other needs identified.
- Contribute to a final debriefing on the deployment of the burn assessment team in the context of the UCPM, with ERCC colleagues.
- Contribute to communication with the media, together with the national authorities, on request.

8.3 Annex 3. Burn assessment team composition and profiles

The composition of the burn assessment team is based on the tasks that need to be performed:

- 1) the assessment of burn severity according to standardised criteria is best done by a trained burn surgeon;
- 2) the assessment of fitness for transport, depending on the severity of organ failure and the need for replacement therapy, is best done by an anaesthesiologist or intensive care specialist trained in burn care. [8,9]

This is why each team must include at least one surgeon and one anaesthesiologist/intensivist.

All burn assessment team members should be fully trained and be on a roster. Burn assessment teams can be registered in the European Civil Protection Pool as a single country capacity or as a combined team with members from different UCPM countries, e.g. regional teams.

If just one burn assessment team is deployed, it will be composed of four experts, as outlined below. If more than one, the ERCC will deploy a liaison officer and provide additional support as necessary.

Function	No	Profile	Organisation
Burn assessment team coordinator	1	Coordination expert	UCPM countries
Senior burn physician	1	Very experienced surgeon or anaesthesiologist/intensivist	UCPM countries
Second burn physician	1	Burn surgeon or intensivist	UCPM countries
Burn nurse	1	Burn nurse	UCPM countries

All team members are expected to be fluent in English and be fully vaccinated (particularly Hepatitis B), in compliance with local requirements.

8.3.1 Burn assessment team coordinator

Responsibilities

- Ensuring the smooth implementation of the burn assessment team's deployment and functioning in accordance with the mission's terms of reference.
- Developing a mission action plan, and providing strategic planning and direction to the team in accordance with the plan ⁽⁹⁾.
- Ensuring overall coordination with national authorities, international organisations and others involved in the incident response.
- Acting as the focal point for the team for security matters.
- Ensuring the required reporting is done in accordance with the terms of reference.

Qualifications

⁹ This responsibility is partly transferred to the ERCC liaison officer, if one is deployed.

- Strong coordination skills in an incident response, and the ability to liaise with those involved locally and internationally.
- UCPM training, minimum level of Operational Management (OPM) course.
- Experience in (burn assessment) team management is advisable, as well as previous experience in UCPM missions.
- Ability to use the tools needed for the smooth running of the burn assessment team mission, such as communication tools, patient data sharing tools, etc.

8.3.2 Burn physicians

Responsibilities

- Ensuring the medical assessment and specialised in-hospital triage of patients in the initial treatment facilities, using the standardised assessment form.
- Providing recommendations on the international referral of selected burn patients, including guidance for their medical evacuation, and assigning levels of priority for evacuation.
- Assessing further assistance needs with regard to the care of the burn patients who will not be transferred, such as medication, equipment, and any other needs identified.

Qualifications

- Certified anaesthesiologist/intensivist or surgeon, with a minimum of 5 years' experience in an EBA-verified¹⁰ burn centre within the past 8 years.
- Participation in burn assessment team training in the past 5 years.
- Experience of providing care for trauma victims is desirable.
- Having followed the Advanced Burns Life Support (ABLS), the Emergency Management of Severe Burns (EMSB) or an equivalent course, is desirable.
- Participation in burn-related simulation exercises is desirable.

Skills

- Ability to work in crisis situations, rapidly assessing basic needs and local capacities.
- Excellent interpersonal and organisational skills – the ability to work in a team.
- Ability to work effectively in a multicultural environment and assume authority as and when needed.
- Ability to operate standard IT and communications equipment.

8.3.3 Burn nurse

Responsibilities

¹⁰ Provisional transition criteria may apply while the EBA is in the process of verifying interested centres. Such criteria may include (a) compliance with national burn care regulations; (b) a written statement of compliance with EBA recommendations, including a detailed description of areas that need more work; (c) a written commitment to engaging in the EBA verification process until the transition period ends.

- Helping the burn assessment team to carry out its tasks, as described in the terms of reference, including providing the first specialised burn care, the secondary assessment and triage, and the drawing up recommendations.

Qualifications

- Registered nurse, currently working in a burn centre, for a minimum of 5 years.
- Participation in burn assessment team training in the past 5 years.
- Having followed the Advanced Burns Life Support (ABLS), the Emergency Management of Severe Burns (EMSB) or an equivalent course, is desirable.
- Participation in burn-related simulation exercises is desirable.

Skills

- Ability to work in crisis situations, rapidly assessing basic needs and local capacities.
- Excellent interpersonal and organisational skills – the ability to work in a team.
- Ability to work effectively in a multicultural environment and assume authority as and when needed.
- Ability to operate standard IT and communications equipment.

8.4 Annex 4. Template for request for international assistance ⁽¹¹⁾

REQUEST FOR INTERNATIONAL ASSISTANCE ***MASS BURN CASUALTY INCIDENT RESPONSE***

1. Requesting country authority contact details:

2. Requested assistance:

Type	Yes	No
Burn assessment teams		
- Paediatric burn specialist		
Medevac capacity		
ICU/Burn beds		
In-kind assistance (<i>material, equipment, etc. – please specify</i>)		
Other		

⇒ **Please attach the Terms of Reference for the requested assistance.**

3. Entry point and location for reception of the assistance:

4. Coordination centre for incident response:

5. Hospital(s) or treatment facilities to be assisted, with contact details:

6. Number of casualties, if known, or approximate number if not:

¹¹ See CECIS for most recent version.

7. The requesting country authority will:

Actions	Yes	No	N/A
Waive any visa and/or immigration requirements			
Issue any visa and/or immigration documents			
Accept the regulated professions of medical doctor and nurse			
Exempt equipment/goods of the modules/teams from all customs, duties, taxes, tariffs, fees, and all import and export restrictions			
Give the assisting modules/teams temporary authorisation to legally operate on the requesting country's territory, including the right to open bank accounts, conclude contracts and leases, acquire and dispose of property and instigate legal proceedings			
Provide security services in case of need and/or at the request of assisting modules/teams			
Support accepted burn assessment teams by providing:			
▪ accommodation			
▪ in-country transport			
▪ medical support			

8. Additional information:

8.5 Annex 5. Template for offer of international assistance ⁽¹²⁾

OFFER OF INTERNATIONAL ASSISTANCE
MASS BURN CASUALTY INCIDENT RESPONSE

1. Offering country authority contact details:

2. General description of offered assistance:

BURN ASSESSMENT TEAM	
Qualification of team member	Number
BURN CARE BEDS	
	Number
ICU bed	
Medium care bed	
Surgical ward bed	
Has the burn department/burn unit/burn centre providing the burn care beds received an internationally recognised quality label? If so, which one?	YES NO Please specify:
IN-KIND ITEMS	
Please specify	Number

¹² See CECIS for most recent version.

MEDEVAC CAPABILITIES			
TRANSPORT MODE (fixed-wing air ambulance or helicopter)	Medevac capability :	YES	NO
	Patient capacity :	SINGLE	MULTIPLE → N°:
	Level of <i>en route</i> /in-flight care :	INTENSIVE CARE	STANDARD
MEDICAL STAFF on board			Number
	Flight physician	YES NO	
	Flight nurse	YES NO	
	Burn intensivist/anaesthesiologist	YES NO	
	Intensivist/anaesthesiologist	YES NO	
	Burn nurse	YES NO	

3. Availability of the assistance offered: (Date) from/...../..... to/...../.....

4. Additional requirements:

8.6 Annex 6. Burn patient assessment sheet (13)

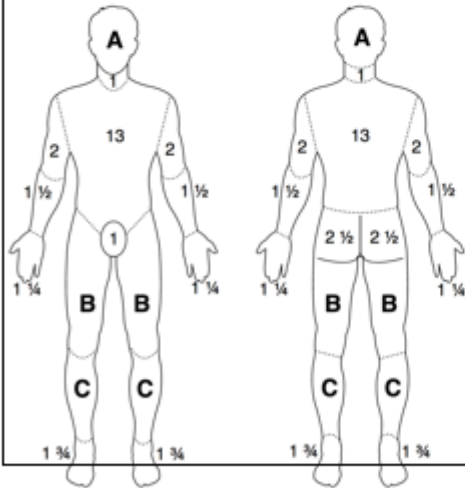


BURN TRIAGE

DATE OF ASSESSMENT:
DATE OF INJURY:

ASSESSED

WOUND MANAGEMENT	
AGE	
WEIGHT	ADMISSION CURRENT
TBSA	
TBSA w/DEEP BURNS	
ASSOCIATED TRAUMA	CHEST ABDOMINAL HEAD LIMBS OTHER: NONE
ESCHAROTOMY NEEDED	YES NO
SURGERY NEEDED	YES NO
	EXCISION AND GRAFTING OTHER COMMENT:
TYPE OF DRESSING	
BAUXr SCORE	
ABSIS SCORE	



Sketch ~~burns~~ ~~scars~~ trauma, ~~drains~~ and ~~tubes~~.

ASSESSED

PEDIATRIC	ADULT
PATIENT ID	
NAME	
LAST NAME	
BIRTH DATE	
SEX	

GENERAL STATUS	
SUSPECTED INHALATION INJURY	YES NO
RESPIRATORY	YES NO VENTILATED TRACHEAL TUBE FIO2/PEEP ETT TRACHEOST NONE W/ RR PIP / PFR SpO2
CIRCULATION	YES NO PULSE BLOOD PRESSURE VASOPRESSORS AGENT/DOSE
INFECTION	NONE SKIN LUNG BLOOD OTHER: ANTIBIOTIC TREATMENT YES NO TYPE:
KIDNEY	URINARY OUTPUT Creatinine clearance Creatinine/urea RRT Hemofiltration Hemodialysis NO
NEUROLOGICAL	INITIAL A V P U CURRENT A V P U SEDATED YES NO RASS +4 +3 +2 +1 0 -1 -2 -3 -4 -5
COMORBIDITIES	YES NO ALLERGY MEDICINES PAST MEDICAL HISTORY EVENTS

TRANSFER RECOMMENDATION	NEEDED NOT NEEDED FUTILE
FIT FOR TRANSPORTATION	YES NO REEVALUATE
RECOMMENDED EN ROUTE CARE LEVEL	CRITICAL STANDARD
RECOMMENDED BURN CENTER CARE LEVEL	ICU MEDIUM CARE SURGICAL WARD
PRIORITY LEVEL	1 2 3 4
SIGN	

¹³ Most recent version: <https://www.euroburn.org/>

Abbreviated burn severity index

Variable	Patient Characteristic	Score
Sex	Female	1
	Male	0
Age in years	0-20	1
	21-40	2
	41-60	3
	61-80	4
	81-100	5
Inhalation injury		1
Full thickness burn		1
Total body surface area burned (%)	1-10	1
	11-20	2
	21-30	3
	31-40	4
	41-50	5
	51-60	6
	61-70	7
	71-80	8
	81-90	9
	91-100	10
Total Burn Score	Threat to Life	Probability of Survival (%)
2-3	Very low	≥ 99
4-5	Moderate	98
6-7	Moderately severe	80-90
8-9	Serious	50-70
10-11	Severe	20-40
12-13	Maximum	≤ 10

Tobiasen, J., Hiebert, J. M., & Edlich, R. F. (1982). The abbreviated burn severity index. *Annals of Emergency Medicine*, 11(5), 260–262.

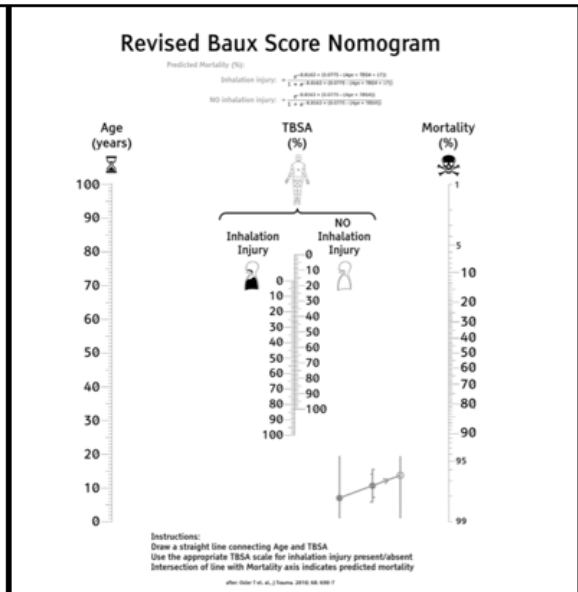


Fig. 2 – Nomogram for the Revised Baux Score for mortality following burns.

Williams, D. J., & Walker, J. D. (2015). A nomogram for calculation of the Revised Baux Score. *Burns*, 41(1), 85–90.

BAUXr SCORE

TBSA + Age + 17 (if inhalation syndrome)

8.7 Annex 7. Specialised in-hospital triage and transport priority levels

The EBA provides guidelines on specialised in-hospital triage, to help burn assessment teams prioritise patients for international referral, in cases where the UCPM is activated for a mass burn casualty incident ⁽¹⁴⁾.

The basic principles are:

- inhalation injury is not considered for triage;
- only patients likely to benefit from specialised care should be transferred;
- more complex clinical conditions are expected to benefit more from early optimal treatment – hence the recommendation to give the highest priority to evacuating the most severely burned patients;
- if resources are limited, more stringent patient selection for evacuation is needed, but with minimal changes in the assignment of priority level.

The EBA triage guidelines do not cover associated traumatic injuries. If the majority of patients have trauma associated with their burns, military or civilian triage rules for mass trauma casualties may be better suited to the situation.

¹⁴ See EBA guidelines for specialised in-hospital triage: <https://www.euroburn.org/>

8.8 Annex 8. Standards for patient transport

The EBA provides detailed guidelines on the medical evacuation (MEDEVAC) of burn patients ⁽¹⁵⁾. The key aspects are summarised below.

Patient selection and care level

If the UCPM is activated, the national authorities of the requesting country take the final decision on which patients are evacuated to another country, taking into consideration the burn assessment teams' recommendations.

The burn assessment teams assess the required level of *en route* care as follows:

- critical: critically ill patients already undergoing intensive supportive treatment; or less severely burned patients whose assessment has concluded they have a significant risk of *en route* decompensation, which will require intensive treatment;
- standard: patients whose assessment has concluded they have a low probability of developing severe *en route* complications.

All relevant patient information gathered by the burn assessment teams is made available to the MEDEVAC teams and the receiving treatment facilities.

Transport mode

The following transport modes should be considered: ground ambulance, helicopter, or fixed wing aircraft for individual or collective patient evacuation. The most appropriate mode of transport for medical evacuation should be selected based on a) the distance/travel time, b) the severity of the injury/injuries, and c) the number of patients. The EBA guidelines provide an algorithm to help select the most suitable mode of transport.

Stages of transport

In case of ground transport, or transport by helicopter, the full range of transportation (from the referring to the receiving treatment facility) is ensured by the country providing the MEDEVAC.

For MEDEVAC by air, three subsequent transport stages or 'loops' need to be taken into account:

1. upstream small loop: transport from the patient departure point (initial treatment facility) to the airport of embarkation, under the responsibility of the affected country;
2. main loop: air transportation, under the responsibility of the MEDEVAC providing country;
3. downstream small loop: transport from the airport of debarkation to the receiving treatment facility, under the responsibility of the receiving country.

Both of the small loops are typically done by ground ambulances, less frequently by helicopter. These loops are time-consuming and entail additional logistical constraints, which must be taken into account when planning for MEDEVAC by air.

¹⁵ See EBA guidelines on the transportation of patients: <https://www.euroburn.org/>

Table: Transport stages and country contributions

Country contribution	Transport stages performed
Affected country	Upstream small loop (referring hospital → airport of embarkation)
MEDEVAC/direct ground transportation	Full range of transportation (referring hospital → receiving treatment facility)
MEDEVAC/helicopter	Full range of transportation (referring hospital → receiving treatment facility)
MEDEVAC/fixed wing	Main loop (airport of embarkation → airport of debarkation)
Receiving country	Downstream small loop (airport of debarkation → receiving treatment facility)

MEDEVAC teams, assets and preparation

In order to ensure the adequate care and the safety of patients during transfers, the EBA transportation guidelines cover:

- the advised composition of MEDEVAC teams, including staff qualifications;
- the required medical equipment and supplies;
- the key aspects of mission preparation and pre-boarding checks.

En route care

Continuity of care must be ensured during the whole transportation process, including during the upstream and downstream small loops, if any. The EBA provides clinical practice guidelines on managing burn patients, as well as guidance on key *en route* patient management issues and the traceability of *en route* care.