WHO Emergency Medical Team Initiative & related ISPRM Disaster Relief Committee activities

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Immediate Past-Chair, Disaster Rehabilitation Committee (DRC)
International Society of Physical and Rehabilitation Medicine (ISPRM)

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Speaker’s Note

This presentation was prepared in consultation with WHO. The speaker does not represent WHO.
### Expected effects of Natural disaster

(From PAHO. Natural Disaster: Protecting the public’s health. Washington, DC: PAHO, 2000)

<table>
<thead>
<tr>
<th>Effect</th>
<th>Earthquakes</th>
<th>Strong Winds</th>
<th>Tsunamis and Flash floods</th>
<th>Ordinary Floods</th>
<th>Landslides</th>
<th>Volcanic and Lava Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of lives</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Severe injuries requiring complex treatment</td>
<td>High</td>
<td>Moderate</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Major risk of communicable diseases</td>
<td></td>
<td></td>
<td>Potential risk following all significant phenomena</td>
<td>(Likelihood increases with crowding and the degradation of sanitary conditions)</td>
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<td></td>
</tr>
<tr>
<td>Damage to health facilities</td>
<td>Severe</td>
<td>Severe</td>
<td>Severe but localized</td>
<td>Severe but localized</td>
<td>Severe but localized</td>
<td>Severe (structure and equipment)</td>
</tr>
<tr>
<td>Damage to water supply systems</td>
<td>Severe</td>
<td>Light</td>
<td>Severe</td>
<td>Light</td>
<td>Severe but localized</td>
<td>Severe</td>
</tr>
<tr>
<td>Food scarcity</td>
<td>Infrequent (generally caused by economic or logistical factors)</td>
<td>Common</td>
<td>Common</td>
<td>Infrequent</td>
<td>Infrequent</td>
<td></td>
</tr>
<tr>
<td>Large migrations</td>
<td>Infrequent (common in severely affected urban areas)</td>
<td>Common</td>
<td></td>
<td>Common (Generally limited)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Welcome to WHO Emergency Medical Teams Initiative

The term EMTs refers to groups of health professionals providing direct clinical care to populations affected by disasters or outbreaks and emergencies as surge capacity to support the local health system. The WHO EMT Initiative aims to support member states, NGOs and international organizations by identifying minimum standards, best practice, logistics and operational field coordination SOPs. EMT Coordination will be in support of a member state affected by a sudden onset disaster (SOD) or an outbreak, upon request of the member state which seeks international medical team assistance for the care of its population. To have more information on the EMT Initiative, have a look at the EMT Booklet and EMT leaflet.

The Emergency Medical Team webpage contains the latest news on EMTs in addition to guidance and reports relevant to the EMT initiative. Also available through this website is the WHO EMT registration portal which allows organizations to declare their compliance with the Classification and Minimum Standards for Foreign Medical Teams in sudden onset disasters and begin the steps towards classification.

Organizations are invited to apply for an account to begin the registration process which may allow them to become verified and deployable under WHO. Click here to be directed to the expression of interest application.
Vision

Reducing the loss of lives and prevention of long-term disabilities in sudden onset disasters and outbreaks through the rapid deployment and coordination of quality assured Emergency Medical Teams.

Mission

Saving Lives

Preserving Health

Protecting Dignity

https://extranet.who.int/fmt/page/home
Who Are EMTs?

The term EMT refers to groups of health professionals providing direct clinical care to populations affected by disasters or outbreaks and emergencies as surge capacity to support the local health system.

They include governmental (both civilian and military) and non-governmental teams and can include both national and international EMTs.
Key Activities

- Expand Global/Regional Coordination and Partnerships
- Set Standards, Collect Best Practices and SOPs and Create Knowledge Hub
- Implement Capacity Building and Training
- Provide Quality Assurance and Classification
- Deliver Response Coordination and in field Quality Assurance

https://extranet.who.int/fmt/page/home
Benefits of Emergency Medical Teams Initiative

Benefits of a global EMT Initiative include:

1. Governments and people affected by emergencies and outbreaks can be assured of a predictable and timely response by well trained and self-sufficient medical teams.

2. Medical Teams that reach the minimum standard and are quality assured in a peer review process will be more likely to be requested to respond by affected member states and have a streamlined arrival process.

3. Donors including the general public can be assured that the teams they support have reached an international minimum standard and work within a globally coordinated response system.

4. The development of an EMT Community of Practice and the creation of a knowledge hub will allow EMTs to share SOPs and best practice. Operational research and development by WHO partners will improve EMT performance.

5. National & Regional EMTs will be capacitated to prepare & respond to domestic, sub-regional & regional events. This will ensure an even more timely and appropriate response to health emergencies in the future.

https://extranet.who.int/fmt/page/home
All health systems are comprised of a series of escalating levels of care from basic primary health to district hospitals to regional referral centres, and it is common practice for patients to move between all levels of care. EMTs in an SOD support the surge in demand at each of these various levels or temporarily replace damaged facilities.

This conceptual model also shows the value of:

- A pre-existing knowledge of context and capacity
- Rapid assessment of facilities and surge in demand can be used to calculate estimated needs for EMT surge capacities
- Similar calculations are possible for an outbreak, but likely to be over a slightly longer timeframe,
- Whereas a “no regrets” approval will be needed for trauma-related events
- This model also shows the importance of Ministries of Health leadership in distribution or tasking of EMTs to cover the needs based on an initial impact assessment.
<table>
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<tr>
<td>Specialized care team (eg rehab, surgical, paediatric, infectious disease)</td>
<td>Teams that can join local facilities or EMTs to provide supplementary specialist care</td>
<td>Variable</td>
</tr>
</tbody>
</table>
Understanding the Global FMT Registration Process

The WHO Global FMT Initiative will list all known Foreign Medical Team (FMT) providing Organizations who agree to comply with a published set of principles and minimum standards (Blue Book). The WHO Pre-registered list will contain all those FMT organizations that have had their self-declared information cross-checked by a peer review process, while the registered list will contain all those FMT organizations who have, in addition, had a satisfactory WHO and peer-review site visit to validate their pre-deployment capability. Final quality assurance occurs during deployment with joint WHO and Ministry of Health visits to ensure compliance with declared capabilities pre-arrival. A fundamental objective of the Global FMT Registration process is to discourage individuals from arriving unannounced to an emergency, instead the WHO Global FMT Initiative encourages these individuals to join recognised organizations. Therefore, only users that represent a FMT providing Organization can apply for a user account. NOT individuals or the individual members of an FMT.
Global Classification Process

1. Apply for a New Global Classification User Account on the WHO EMTI Website
2. Submit an Expression of Interest to be listed in the Global EMT Registry
3. Global Mentorship Program
4. WHO Verification Site Visit and Validation
5. Quality Assurance Process
**Numbers**

- **Haiti Earthquake**
  - 300 Teams deployed

- **Philippines**
  - 83 Total number of EMTs registered on arrival
  - 151 Total number of EMTs deployed, and actively engaged in coordination
  - A total of 193,647 consultations were recorded by the 83 reporting teams

- **Vanuatu**
  - Total number of medical teams deployed: 28
  - Total number of international medical staff: 169

- **Ebola Outbreak**
  - The Ebola response was the largest deployment of EMTs for an outbreak
  - 58 teams and over 4,000 staff

https://extranet.who.int/fmt/page/home
Rehabilitation burden in emergency

Benefits of integrating rehabilitation

1. Improved functional outcome
2. Improved quality of life
3. Decreased length of stay
4. More efficient hospital
5. Better continuity of care
WHO Trauma Guidelines

Much of the disability from extremity injuries in developing countries should be eminently preventable through inexpensive improvements in orthopaedic care and rehabilitation.

The consequences to the individual of injuries that result in physical impairment are minimized by appropriate rehabilitative services.

Basic physiotherapy/occupational therapy for those recovering from extremity injuries (especially fractures and burns) is deemed essential at all hospital levels.
ICRC WAR SURGERY

The outcome of surgery is determined by the quality of hospital treatment (resuscitation, surgery, post-operative care, physical therapy and rehabilitation).

SPHERE HUMANITARIAN STANDARDS

Surgery provided without any immediate rehabilitation can result in a complete failure in restoring functional capacities of the patient.

Early rehabilitation can greatly increase survival and enhance the quality of life for injured survivors.
Rehabilitation is one of the core functions of trauma care systems in regular health care and as such FMTs should have specific plans for the provision of rehabilitation services to their patients post sudden onset disaster.

Rehabilitation is included as a core component (either integral or via referral) of any inpatient surgical team while specialist rehabilitation teams may be deployed to provide support to FMTs and hospitals unable to provide rehab services.
Why?

• Integration of rehabilitation into early response is not a consideration of many surgical teams
• A more effective EMT response is likely to result in increased impairment and rehabilitation need - not a decrease
• Rehabilitation services are poorly developed in most LMIC
• Identified as a priority area by WHO
How?

- Literature review
- Emphasis on SOD with major trauma
- Highly consultative inter-disciplinary process
- Working group included OT, PT, P&O, Rehab Medicine and Rehab Nursing
- Contributing organisations included CBM, ICRC, HI, MSF and WHO
- Reviewed by WHO, EMT leaders and global professional bodies (ISPRM, WFOT, WCPT, ISCOS)
Key Standards

• One rehabilitation professional per 20 beds with further recruitment depending on case-load and local rehabilitation capacity

• Allocation of a dedicated rehabilitation space of at least 12 m² for deployments exceeding 3 weeks

• Deployment of EMTs with at least the essential rehabilitation equipment and consumables

• Reporting of patients with notifiable injuries (spinal cord injury, lower limb amputation or complex fracture) to the MoH of the host country/WHO coordination cell at specified intervals
3.5 Considerations for patient management

3.5.1 Rehabilitation considerations by type of injury

Table 6 lists common traumatic injuries managed by EMTs and the presentation of people with pre-existing disability. Rehabilitation for specific injuries by EMT type is described in Annex 2.

**Table 6. Considerations for rehabilitation after common severe traumatic injuries and pre-existing disability in emergencies**

<table>
<thead>
<tr>
<th>Patients with spinal cord injury</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimum standards</strong></td>
<td></td>
</tr>
<tr>
<td>1. The host ministry of health/coordination cell should be informed of all patients with suspected spinal cord injury via the established reporting system.</td>
<td>Management of patients with spinal cord injury in specialized centres reduces complications and the length of stay (4). The host ministry of health/coordination cell can help in identifying spinal injury centres or specialized care teams.</td>
</tr>
<tr>
<td>2. People with a long-term wheelchair requirement should be referred rapidly to local providers.</td>
<td></td>
</tr>
<tr>
<td><strong>Recommendations</strong></td>
<td></td>
</tr>
<tr>
<td>1. EMTs are encouraged to identify safe transfer options early for patients who have sustained spinal cord injuries, so that they are managed at a specialized centre with experienced rehabilitation staff.</td>
<td></td>
</tr>
<tr>
<td>2. Support from peers with spinal cord injuries can be beneficial; therefore, links should be established with local disabled people's organizations and any community-based rehabilitation programmes after the acute phase.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Patients with amputation</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimum standards</strong></td>
<td></td>
</tr>
<tr>
<td>1. Rehabilitation input should commence from the pre-operative stage of care to advise on what level would be best in light of prosthetic availability and functional outcome.</td>
<td>Prescription of appropriate assistive devices promotes independence and facilitates discharge. Lack of appropriate rehabilitation in amputation care can result in contractures and other complications, which can delay the fitting of a prosthetic device, restrict functional performance and sometimes require further surgery (33).</td>
</tr>
<tr>
<td>2. Links with local prosthetic providers and prescription of appropriate assistive devices should be established as early as possible.</td>
<td></td>
</tr>
<tr>
<td><strong>Recommendations</strong></td>
<td></td>
</tr>
<tr>
<td>1. Support from peers with amputations can be beneficial; therefore, links should be established with local disabled people's organizations and any community-based rehabilitation programmes after the acute phase.</td>
<td></td>
</tr>
<tr>
<td>Patients with traumatic brain injury</td>
<td></td>
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<tr>
<td>-----------------------------------</td>
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</tr>
<tr>
<td><strong>Minimum standards</strong></td>
<td><strong>Rationale</strong></td>
</tr>
<tr>
<td>If long-term mobility deficits are anticipated, a local provider of appropriate wheelchairs and mobility aids should be identified early.</td>
<td>In emergencies, mild traumatic brain injuries are often missed, as attention is paid to more visible injuries. Severe traumatic brain injuries are often rare, because of low survival rates. In settings where ventilation equipment is readily available, however, people with severe brain injuries may survive. They will require extensive rehabilitation throughout the continuum of care and perhaps for months or years. A plan for continuing care and links with local service providers are therefore necessary.</td>
</tr>
<tr>
<td>2. The patient should be referred to local providers and peer support groups before discharge.</td>
<td></td>
</tr>
<tr>
<td><strong>Recommendations</strong></td>
<td></td>
</tr>
<tr>
<td>1. Depending on the anticipated duration of inpatient stay and rehabilitation needs, plans for referral to a step-down facility should be made early and local rehabilitation providers and support networks identified.</td>
<td></td>
</tr>
<tr>
<td>2. Cognitive and neurological changes should be monitored with regular, documented assessments.</td>
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</tr>
<tr>
<td>3. EMTs should establish links with local disabled people’s organizations and any community-based rehabilitation programmes.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patients with peripheral nerve injury</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimum standards</strong></td>
<td><strong>Rationale</strong></td>
</tr>
<tr>
<td>1. EMTs should identify referral pathways for microsurgery for patients for whom this is considered beneficial.</td>
<td>Orthotic devices can require continuing maintenance or renewal during the patient’s life and in many cases have to be custom-made. Devices should therefore be obtained from a local provider (27, 28).</td>
</tr>
<tr>
<td>2. Patients with long-term or permanent nerve injury should be considered for provision of an orthotic device, which should be sought from a local provider to replace any temporary device provided by the EMT.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Patients with fracture</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimum standards</strong></td>
<td><strong>Rationale</strong></td>
</tr>
<tr>
<td>1. When an inpatient is discharged, restrictions such as weight bearing and follow-up plans such as for removal of a cast or an external fixator should be clearly documented and communicated to the patient, and a telephone number should be obtained for further communication.</td>
<td>In previous emergency responses, many patients have been lost to follow-up after discharge into the community. Patients immobilized for long periods can develop significant complications, such as contractures or joint ossification. Patients should therefore be given clear information about plans for follow-up and the implications of not receiving timely care (1, 23).</td>
</tr>
<tr>
<td><strong>Patients with burns</strong></td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Minimum standards</strong></td>
<td></td>
</tr>
</tbody>
</table>
| 1. Rehabilitation should be started in the most acute phase of care. For inhalation burns, respiratory care, such as chest physiotherapy, should be started from day 1 of patient care.  
2. When long-term functional implications are suspected, the patient should be referred to appropriate specialist care. |
| **Recommendations**    |
| 1. EMTs should identify local services that can provide long-term follow-up (≤ 18 months) for patients who have severe (second- or third-degree) burns, especially when they cross-joints, are on the face or on any part of the hand.  
2. A rehabilitation specialist competent in splinting and scar management, including compression bandaging, should treat patients with severe burns, if possible. |

<table>
<thead>
<tr>
<th><strong>People with pre-existing disability</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimum standards</strong></td>
</tr>
<tr>
<td>1. EMTs should ensure that people with a pre-existing disability have equal access to services by referring to them to appropriate providers when indicated.</td>
</tr>
<tr>
<td><strong>Recommendations</strong></td>
</tr>
<tr>
<td>1. EMTs should incorporate capacity-building into their services and leave local staff with formal training in rehabilitation so that they can manage disability when necessary.</td>
</tr>
</tbody>
</table>
Key Standard: Discharge/Referral

- To ensure rehabilitation referrals are managed effectively, the patient & referring EMT should keep a copy of the referral, including at a minimum:
  
  ✓ functional status, including mobility and precautions
  ✓ assistive devices provided
  ✓ follow-up requirements with the referral team (e.g. repeat x-ray, surgical review, external fixator removal)

- EMTs should keep a current list of all patients who require rehabilitation follow-up post-discharge or after the departure of the EMT & communicate the list to the host MOH/coordinating cell as requested.
Figure 2. EMT rehabilitation referral pathway

Present to EMT

Triage

- Ongoing rehabilitation or support needed beyond the stay of the EMT?
  - Yes: Refer to local service provider**
  - No: Discharge home

Outpatient

- Surgical management
  - Rehabilitation as indicated
    - Medically stable
      - Yes: Discharge destination
        - Safe?
          - No: Follow-up rehabilitation required?
            - Yes: Delay discharge or refer to step-down facility.
            - No: Discharge home
        - Accessible?
          - Yes: Discharge destination
            - Adequate support?
              - Yes: Discharge destination
              - No: Follow-up rehabilitation required?
                - Yes: Delay discharge or refer to step-down facility.
                - No: Discharge home
          - No: Discharge destination
            - Safe?
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        - No: Follow-up rehabilitation required?
          - Yes: Delay discharge or refer to step-down facility.
          - No: Discharge home

Inpatient

- Spinal cord injury Specialist centre
  - Yes: Identify & refer to a local provider early
  - No: Discharge destination
    - Safe?
      - Yes: Discharge destination
      - No: Follow-up rehabilitation required?
        - Yes: Delay discharge or refer to step-down facility.
        - No: Discharge home
    - Accessible?
      - Yes: Discharge destination
      - No: Follow-up rehabilitation required?
        - Yes: Delay discharge or refer to step-down facility.
        - No: Discharge home
    - Adequate support?
      - Yes: Discharge destination
      - No: Follow-up rehabilitation required?
        - Yes: Delay discharge or refer to step-down facility.
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* Such as a prosthetic, orthotic or wheelchair
** National facility, IO or NGO
## Who EMT Classification

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<tr>
<td>infectious disease)</td>
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REHABILITATION Specialized Care Team

- Embedded into an EMT or a local facility
- LOS 1 month minimum or same as host team
- Brings its equipment or contracts for its provision
- Aligns services with local infrastructure & practice
- Considers service provision after its departure
Nepal Earthquake (2015) [IASC L3]

- Majority of EMTs had no rehab with limited referral
- Limited early data dependent on individual reporting with no EMT injury tracking system
- Creation of an injury rehabilitation sub-cluster (IRSC) at the request of MoHP and WHO for data management, service mapping, referral mechanism implementation and coordination of incoming rehab specialized care teams
Distribution of fixed point physical rehabilitation services within most affected districts - June 16th 2015

- Under assessment
- Proposed stepdown rehab facility
- Fixed rehabilitation point
- Operational stepdown/rehabilitation facility
Role of ISPRM CRDR: Nepal

CRDR leadership

- **Confirmed** FMT policy with WHO Coordination Cell; monitored disaster developments
- **Advised** rehab ISPRM national society-linked teams on FMT registration/reporting procedures & developments
- **Liased** with WHO/MoHP IRSC on response issues including referral of FMTs

CRDR members

- **Coordinated** Australia & Bangladesh FMTs
- **Implemented** earthquake relief funds for SIRC
- **Participated** in SIRC online tele-rehab
Role of ISPRM CRDR: WHO EMTI

- Consulted on development of 'WHO Minimum Standards for Rehabilitation in Emergencies for EMTs (November, 2016) as a reviewing organization and as WG members
- To support ISPRM National Societies in helping individuals and teams meet minimum standards for rehabilitation
  - inform of WHO EMTI and global EMT Classification
  - disseminate the rehab standards
  - provide relevant humanitarian education/training
<table>
<thead>
<tr>
<th>Technical standard</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Page/resource</th>
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<tbody>
<tr>
<td>Skill requirements</td>
<td>Provide basic rehabilitation, or refer to another EMT or existing local facility.</td>
<td>Experienced in trauma and medical rehabilitation and working in austere environments, including ability to manage discharges and work within established coordination mechanisms. Ability to add specialist rehabilitation professionals as required.</td>
<td>Rehabilitation professionals should have the necessary professional credentials to practise in their home country. Those whose home countries do not give professional certification may practise under the direction and authority of their EMT clinical leader, with the approval of the ministry of health of the host country.</td>
<td>pp. 7-8</td>
</tr>
<tr>
<td>Team configuration</td>
<td>Rehabilitation capacity recommended.</td>
<td>At least one rehabilitation professional per 20 beds, to be increased in accordance with need.</td>
<td></td>
<td>p. 9-10</td>
</tr>
<tr>
<td>Specialized care teams</td>
<td>Medical specialized care teams: Incorporate rehabilitation professional(s) (with appropriate specialization) into the team if rehabilitation is required.</td>
<td>Rehabilitation specialized care teams: Stay for the same duration as the EMT into which they are embedded and for at least 1 month if embedded into a local facility. These teams should either deploy with the equipment and consumables required to be self-sufficient for at least 2 weeks or arrange to have it provided by the EMT or national facility into which they are embedded.</td>
<td>Medical specialized care teams:</td>
<td>p. 11</td>
</tr>
</tbody>
</table>

**Demonstration**

**Medical specialized care teams**

*Pre-deployment:* Team has a cohort of rehabilitation professionals with skills appropriate to the specialization of the team who can be drawn upon in an emergency; their number should ensure the availability of personnel for rapid deployment.

*In field:* The ratio of rehabilitation professionals in the team reflects the team's capacity.

**Rehabilitation specialized care teams**

*Pre-deployment:* Essential equipment and consumables are stocked OR documentation of agreement with another provider for provision of the same can be presented.

*In field:* Do not work separately from an EMT or local facility.
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<td>Step-down facilities</td>
<td>Transition only at the request of host ministry of health/coordination cell and remain in the field for a minimum of 3 months from the time of their transition or until local capacity is sufficient to continue the required care. Continue to provide medical and nursing support with an emphasis on rehabilitation.</td>
<td></td>
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<td>p. 13</td>
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<td></td>
<td><strong>Demonstration</strong></td>
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<td><em>Pre-deployment or in field:</em> Can present a plan for adequate equipment and appropriate staffing agreements (medical, nursing and rehabilitation) to remain in the field for 3 months.</td>
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<td><em>In field:</em> Uses local staff in service delivery and training.</td>
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<td>Rehabilitation equipment and consumables</td>
<td>Deploy with listed essential equipment in order to be self-sufficient for 2 weeks or have a documented agreement with another EMT, organization or local service provider. Equipment should be monitored and replenished according to the case-load and length of stay.</td>
<td>Specialized care teams should deploy with additional equipment specific to their work.</td>
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<td>pp. 14–18</td>
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<td><strong>Demonstration</strong></td>
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<td><em>Pre-deployment:</em> Types 2 and 3 teams have essential equipment and consumables stocked OR can present documentation of agreement with another provider for provision of the same.</td>
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<td><em>In field:</em> Types 2 and 3 teams can present an updated inventory of equipment and consumables and describe their plan for replenishing stocks.</td>
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<td>Field hospital accessibility and rehabilitation space</td>
<td>Pathways for patients are flat or ramped where necessary, and the ground is compact or levelled to facilitate safe, independent access for people with reduced mobility. Allocate rehabilitation space of at least 12 m² if the stay exceeds 3 weeks.</td>
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<td>pp. 20–21 Annex 1: Dimensions and gradients for accessibility in field hospitals</td>
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<td><strong>Demonstration</strong></td>
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<td><em>Pre-deployment:</em> Type 2 teams that may stay for more than 3 weeks and all type 3 teams have an additional tent (at least 12 m²) and show the accommodation of this space in their facility blueprint.</td>
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<td><em>In field:</em> Type 2 teams that may stay for more than 3 weeks and all type 3 teams include 12 m² of rehabilitation space in their field hospital. Pathways within and around the hospital have been constructed with consideration of accessibility: flat or ramped, sufficiently wide and compacted where possible.</td>
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<td>Rehabilitation considerations by injury type</td>
<td>See Table 6. Considerations for common severe traumatic injuries and pre-existing disability in emergencies</td>
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<td>pp. 22–24</td>
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<td><strong>Demonstration</strong></td>
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<td><em>In field:</em> Team communicates regularly with the host ministry of health/coordination cell and takes direction on referring patients to specialist facilities or teams when necessary.</td>
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<td>Technical standard</td>
<td>Type 1</td>
<td>Type 2</td>
<td>Type 3</td>
<td>Page/resource</td>
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<tr>
<td>Discharge and referral</td>
<td>Demonstrates use of effective referral mechanisms to rehabilitation service providers.</td>
<td>Discharge planned as early as possible and only when patients can safely access their discharge destination (with or without assistance) and when they have adequate support. Referred to another service provider when patient needs persist beyond the departure of the EMT.</td>
<td></td>
<td>pp. 25–26 Fig. 2. Rehabilitation referral pathway</td>
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<td>Keep a copy of the referral, which should contain details of assistive devices, functional status and follow-up requirements. Keep an updated list of all patients who require follow up.</td>
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<td><strong>Demonstration</strong></td>
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<td>Pre-deployment and in field: Demonstrate knowledge of coordination mechanisms and can demonstrate basic referral and reporting processes. In field: Can present a list of patients who require follow-up and copies of referral forms with required information.</td>
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<td>Rehabilitation capacity-building</td>
<td>Maximize opportunities for exchange of knowledge and competence with local personnel and different disciplines and for training patients and care providers. All training is aligned with local frameworks and respects local practices.</td>
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<td><strong>Demonstration</strong></td>
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<td>In daily practice of team</td>
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<td>Health records</td>
<td>Incorporate rehabilitation notes into health file, and include rehabilitation interventions, assessments and assistive devices. Entries comply with international professional standards.</td>
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<td>p. 28</td>
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<td><strong>Demonstration</strong></td>
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<td>In field: Patients' health files include rehabilitation notes when an intervention has been made. Entries into the health files are signed, dated and legible.</td>
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<td>Data collection and reporting</td>
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<td>Report all notifiable injuries requested to the host ministry of health/coordination cell at stipulated intervals.</td>
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<td><strong>Demonstration</strong></td>
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<tr>
<td></td>
<td>In field: Host ministry of health/coordination cell receives completed, accurate daily reporting forms.</td>
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<td>Research in emergency response</td>
<td>Maintain all professional, institutional and federal ethical standards for research with human participants.</td>
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<td><strong>Demonstration</strong></td>
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<td>In field: Researchers can present forms for ethical approval and consent signed by all study participants and from the EMT or facility in which they are embedded. Research does not detract from rehabilitation capacity.</td>
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</tbody>
</table>
ACKNOWLEDGMENTS

WHO Emergency Medical Teams Initiative
WHO Rehabilitation Minimum Standards Working Group
Annex 3. Resources

Emergency response standards

Physical accessibility

Disability in emergency response

Mental health and psychosocial support

Mobility devices

Spinal cord injury
Thank you
### Annex 2. Overview of rehabilitation input by EMT type, and specific discharge considerations

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Referral and discharge considerations</th>
</tr>
</thead>
</table>
| **Basic fracture (conservative management)** | Provide clear guidance on weight-bearing status  
Provide assistive devices  
Advise on range of motion (ROM) and functional use | As type 1 | As type 1 | Rehabilitation follow-up |
| **Complex fracture** | Provide assistive devices  
Advise on ROM and precautions  
Functional retraining  
External-fixator care  
Pain management  
Patient and care provider education | Provide assistive devices  
Advise on ROM precautions  
Functional retraining  
External-fixator care  
Pain management  
Patient and care provider education | Provide assistive devices  
Advise on ROM precautions  
Functional retraining  
External-fixator care  
Pain management  
Patient and care provider education | Clarify time for removal of external fixator  
Progression of weight-bearing status  
Education about possible complications  
Rehabilitation follow-up |
| **Spinal cord injury** | Neurological assessment  
Refer according to national protocol or specialized care team  
Pain management  
Functional retraining  
Provide temporary wheelchair  
Refer according to national protocol or specialized care team  
Patient and care provider education | Neurological assessment  
Pain management  
Functional retraining  
Provide temporary wheelchair  
Refer according to national protocol or specialized care team  
Patient and care provider education | Neurological assessment  
Pain management  
Functional retraining  
Provide temporary wheelchair  
Refer according to national protocol or specialized care team  
Patient and care provider education | Provide temporary assistive devices, including pressure-relieving equipment  
Educated on self-care, including bladder and bowel management, and precautions  
Referral to local provider for long-term assistive devices  
Rehabilitation follow-up |
| **Burns** | Advise on appropriate dressing and refer to specialized care team if indicated  
Positioning, including splinting if indicated  
ROM, strength and functional retraining  
Refer to burns/plastics specialized care team if indicated  
Patient and care provider education | Advise on appropriate dressing  
Positioning, including splinting if indicated  
ROM, strength and functional retraining  
Refer to burns/plastics specialized care team if indicated  
Patient and care provider education | Advise on appropriate dressing  
Positioning, including splinting if indicated  
ROM, strength and functional retraining  
Refer to burns/plastics specialized care team if indicated  
Patient and care provider education | Identify step-down facility if required  
Identify providers of local burns/plastics care and/or specialized burns care team for scar management, including compression garments. Long-term rehabilitation follow up required for scar maturation and risk for contracture |
<table>
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<tr>
<th></th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Referral and discharge considerations</th>
</tr>
</thead>
</table>
| **Peripheral nerve injury** | - Positioning, including splinting if indicated  
- Patient and care provider education  
- Refer as indicated | - Positioning, including splinting if indicated  
- Patient and care provider education  
- ROM, strength and functional retraining  
- Pain management  
- Refer to microsurgery specialized care team if indicated | - Positioning, including splinting if indicated  
- Patient and care provider education  
- ROM, strength and functional retraining  
- Pain management  
- Refer to microsurgery specialized care team if indicated | - Identify microsurgery specialist care early if surgical intervention anticipated  
- Referral to local provider for long-term assistive devices (such as orthotics)  
- Education about possible complications, such as contracture  
- Rehabilitation follow-up |
| **Traumatic brain injury**   | - Basic neurological and cognitive assessment  
- Refer as indicated | - Neurological and cognitive assessments  
- Positioning, including splinting if indicated  
- ROM, strength and functional retraining  
- Patient and care provider education  
- Refer to neurological specialized care team if indicated | - Neurological and cognitive assessments  
- Positioning, including splinting if indicated  
- ROM, strength and functional retraining  
- Patient and care provider education  
- Refer to neurological specialized care team if indicated | - Identify step-down facility if required  
- Identify local providers of neurological rehabilitation. Provide long-term follow up throughout neurological recovery  
- Referral to local provider for long-term assistive devices if indicated |
| **Wounds**             | - Advise on appropriate dressing, and refer as indicated               | - Advise on appropriate dressing  
- Provide assistive devices  
- ROM, strength and functional retraining  
- Patient and care provider education  
- Refer to plastics specialized care team if indicated | - Advise on appropriate dressing  
- Provide assistive devices  
- ROM, strength and functional retraining  
- Patient and care provider education  
- Refer to plastics specialized care team if indicated | - Identify plastics specialized care team early  
- Progression of weight-bearing status  
- Education about possible complications, such as infection  
- Rehabilitation follow-up if indicated |
| **Amputation**          | - Basic wound management  
- Refer to type 2 or 3 or national facility  | - Preoperative advice according to prosthetic availability and functional outcomes  
- Stump management  
- Provide temporary assistive devices  
- Pain management  
- ROM, strength and functional retraining  
- Patient and care provider education | - Preoperative advice according to prosthetic availability and functional outcomes  
- Stump management  
- Provide temporary assistive devices  
- Pain management  
- ROM, strength and functional retraining  
- Patient and care provider education | - Referral to local provider for long-term assistive devices, such as prosthetic and/or wheelchair if indicated  
- Rehabilitation follow-up |
Minimum standards

1. Rehabilitation professionals with an arriving team should be experienced in trauma and medical rehabilitation with experience and/or training to work in austere environments.

2. Rehabilitation professionals should comply with the same requirements for practice as in their home country (such as professional registration and licensing) and should work within their scope of practice. Those from countries in which there is no professional certification may practice under the direction and authority of their EMT clinical lead with approval of the ministry of health of the host country.

Type 1: Type 1 EMTs should be able to provide basic rehabilitation care or refer patients to an appropriate EMT or existing local facility.

Types 2 and 3: Types 2 and 3 EMTs, with one or numerous rehabilitation professionals, should be able to autonomously to provide rehabilitation for patients with:
- fracture, including those with external fixation or traction;
- amputation;
- peripheral nerve injury or
- burns, grafts or flaps.

Type 2 and 3 EMTs should be able to provide early rehabilitation to patients with acquired brain injury and spinal cord injury while they await specialist rehabilitation.
Gap: Staff

- How best for EMTs to meet the 1/20 ratio and ensure these staff are trained?
  - Recruit own staff?
  - Partner with a rehab INGO?
  - Partner with a national association?
Key Standard: Layout and Accessibility

- For deployments exceeding 3 weeks, allocation of a purpose-specific rehabilitation space of at least 12 m²

- Recommendations regarding latrines and accessibility.
**Key Standard: Equipment**

Deployment of EMTs with at least the essential rehabilitation equipment and consumables

- Pragmatic approach taken considering likely logistical constraints
- Self sufficient for first 2 weeks
- 6 wheelchairs & 30 pairs of crutches per 20 beds
Gap: Reporting & Coordination

- Ensuring rehab is considered in discharge/referral
- Standardised reporting that captures all those with impairment (notifiable injuries and those on EMT database needing follow up)
- General gap: standardisation of a coordination mechanism for those with ongoing nursing/rehabilitation needs
Step-Down Facilities

‘An inpatient unit with a mandate to provide interim care for medically stable patients while preparing them for discharge into the community’

- EMT transforms to step down at request of MoH
- Includes nursing & rehabilitation
- Minimum stay 3 months
Coordination

It is essential for EMTs to not duplicate existing rehabilitation services but integrate with and establish referral pathways to existing local service providers.