Training of Local Rehabilitation Service Providers:
A Milestone Towards Effectiveness and Long-Term Sustainability of Post-Disaster Interventions

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Sustainability of a post-disaster intervention

- Aims and objectives
- Trainees
- Trainers
- Training methodology
- Duration
Post-emergency project Capitalization DVD

1. Training
   1.1 Curriculum
   1.2 Presentations
   1.3 Videos

2. Patient information and training tools
   2.1 Brochures
   2.2 Exercise leaflets

3. Rehabilitation checklist guidelines (Amputation, Bedridden/ICU, Burns, Fracture, Head Injury, SCI)
Post-emergency project Capitalization DVD

4. Patient Management
   4.1 During the 1\textsuperscript{st} phase (post-emergency)
   4.2 During the 2\textsuperscript{nd} phase (development)

5. (Early) Rehabilitation Equipment Catalogue

6. Additional Resources
   6.1 Reference documents and videos
   6.2 Websites
Training Manual: Early Rehabilitation Protocols

Divided into 4 sections:

1. The importance of early rehabilitation:
   - The benefits of rehabilitation
   - The risks of no rehabilitation
   - A guideline on how and when to provide early rehabilitation (risk assessment)
2. Protocols by injury

- Fracture
- Head Injury
- SCI
- Amputation
- Bedridden/ICU patients
- Burns
- Peripheral Nerve Injury

### 1.1. Definition and cause

A bone fracture can be defined as a break in a bone (the bone is “broken”).

Fractures generally happen because of a trauma (a hit on the bone, a fall, a car accident), but it can also be the result of a weakened bone (the bone may become weaker because of a disease, such as osteoporosis, or because of repetitive stress during intensive sport activities, for example such as stress fracture).

### 1.2. Types of fracture

<table>
<thead>
<tr>
<th>Fracture Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commminuted fracture</td>
<td>A fracture of many fragments</td>
</tr>
<tr>
<td>Open fracture</td>
<td>A fracture which breaks the skin</td>
</tr>
<tr>
<td>Simple fracture</td>
<td>A fracture in which the bone is not completely broken</td>
</tr>
<tr>
<td>Multiple fracture</td>
<td>A fracture in which the bone is broken in multiple places</td>
</tr>
<tr>
<td>Displaced fracture</td>
<td>The bone is broken into two pieces and the two parts of the bone moved</td>
</tr>
</tbody>
</table>

### Example:

- A patient with a displaced fracture of the femur due to a car accident will require immediate medical attention and may require surgery to realign the bone.
Training Manual: Early Rehabilitation Protocols

3. PT Protocols by Techniques

- Passive and passive-assisted mobilization
- Active mobilization and strengthening
- Stretching exercises
- Positioning and changing of position
- Chest therapy
- Transfers and mobility
- Balance exercises
- Teaching the patient/family
4. Teaching the patient/family

Brochures on:
- Amputees
- Fracture
- Head Injury
- Spinal Cord Injury
- Bedridden patients
- Information on rehabilitation
- Information on assistive devices
# Checklist Guidelines - Amputation

## Assessment

**Day 1**
- Assessment to decide whether referral for rehab assessment is needed. Refer to rehab department if:
  1. Patient bedridden and unable to move self in bed
  2. Prolonged bed rest prescribed
  3. Patient had surgery (or plan for surgery within the coming days)
  4. Respiratory complications
  5. Any muscle weakness
  6. Any mobility problems
- If yes to any of the above, then refer for rehab even if medically unstable.

**Person responsible**: Doctor

**Where to find information (capitalization document)**: Rehab needs assessment form

## Assessment form

**Day 2**
- Rehabilitation assessment
- Musculoskeletal Assessment (+++)
- Neurological Assessment
- Respiratory Assessment
- Functional Assessment:
  1. Positioning (+++)
  2. Transfers and mobility (+++)
  3. ADLs
  4. Assessment for mobility aid or assistive device for ADLs (+++)

**Person responsible**: Rehab staff

## Physiotherapy Exercise

- Stump bandage and scar massage
- Chest therapy
- Stretching

**Person responsible**: Rehab staff or nurse (if trained)

## Mobility and transfers

- Sit up in bed/sit over edge of bed (+++)

**Person responsible**: Rehab staff or nurse (if trained)

## Functional Exercise

- Encourage participation in all activities of daily living

**Person responsible**: Rehab staff or nurse (if trained)

## Information to Patient and Family

- Show exercise, scar massage, mobility and transfer techniques and provide exercise cards (+++)

**Person responsible**: Rehab staff or nurse (if trained)

- Show patient and family how the patient can participate as much as possible in their activities of daily living

**Person responsible**: Rehab staff or nurse (if trained)

- Give information brochure (+++)

**Person responsible**: Relating staff or nurse (if trained)
Checklist Guidelines - SCI

Rehabilitation Checklist Guidelines – Spinal Cord Injury (SCI)

<table>
<thead>
<tr>
<th>When</th>
<th>Action to be taken</th>
<th>Person responsible</th>
<th>Dose (Date)</th>
<th>If not done, why?</th>
<th>Where to find information</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASAP</td>
<td>ASIA score</td>
<td>Rehab staff</td>
<td>(___)</td>
<td>SCI Protocol p. 47</td>
<td></td>
</tr>
<tr>
<td>Day 1</td>
<td>Respiratory assessment Treatment for respiratory complications</td>
<td>Doctor</td>
<td>(___)</td>
<td></td>
<td>p. 50 &amp; 113</td>
</tr>
<tr>
<td>Day 1</td>
<td>If patient unable to move: positioning</td>
<td>Rehab staff or nurse (if trained)</td>
<td>(___)</td>
<td></td>
<td>p. 131</td>
</tr>
<tr>
<td>Day 1</td>
<td>ASSESSMENT to decide whether needs referral for rehab assessment: ALL PERSONS WITH A SCI SHOULD BE REFERRED TO THE REHAB DEPARTMENT ASAP (even when medically unstable, so Rehab Department are aware of patient).</td>
<td>Doctor</td>
<td>(___)</td>
<td></td>
<td>Rehab needs assessment form</td>
</tr>
</tbody>
</table>

Prior to any rehabilitation: complete risk assessment (refer to risk assessment performed) and rehabilitation risk assessment (refer to assessment form for details about needs and specific contra-indications).

- Rehabilitation assessment
- Musculoskeletal assessment
- Neurological assessment (+ASIA if not done already)

Functional Assessment:
- SCIM (Spinal Cord Injury Measure)
- Positioning
- Transfers and mobility
- ADLs
- Assessment for mobility aid or assistive device for ADLs
- For levels above C6 ongoing monitoring of upper limbs (muscle length, function)

- Physiotherapy Exercise
- Mobilization: passive and passive assisted
- Mobilization: active and resisted
- Stretching

- After Rehab Assessment (see protocol)
- Mobility and transfers
- Sit up in bed/ sit over edge of bed

- After Rehab Assessment (see protocol)
- Functional exercise
- Encourage participation in all activities of daily living:
  1. Washing
  2. Brushing teeth, combing hair
  3. Dressing
  4. Eating and drinking

- ASAP
- Pressure relief
- Advice and education
- See SCI Chapter (p. 53)
- Information to Patient and Family
  - Show exercise, mobility and transfer techniques and provide exercise cards
  - Show patient and family how the patient can participate as much as possible in their activities of daily living

- ASAP
- Assessment of bladder and bowel function
- Bladder and bowel management
- See Annex

- ASAP
- Information to Patient and Family
- Show exercise, mobility and transfer techniques and provide exercise cards
- Show patient and family how the patient can participate as much as possible in their activities of daily living

- ASAP
- Assessment of bladder and bowel function
- Bladder and bowel management
- See Annex

- ASAP
- Information to Patient and Family
- Show exercise, mobility and transfer techniques and provide exercise cards
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Before d/c
- Give information brochure
### Early Rehabilitation Needs Assessment form

This form aims to help medical staffs that are not specialized in rehabilitation (doctors, nurses) to identify needs for early rehabilitation. If the answer to, at least, one of the following questions is yes, please refer the patient to rehabilitation staff (if available) or staff that has been trained on early rehabilitation (nurses, doctors). Following this referral, a deeper assessment will be done to identify the exact needs of the patient in terms of early rehabilitation.

#### 1. General information

<table>
<thead>
<tr>
<th>Assessment date</th>
<th>Registration number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Birth date</td>
</tr>
<tr>
<td></td>
<td>Sex: M/F</td>
</tr>
</tbody>
</table>

#### 2. Please answer the following questions:

- **Is the patient unconscious (coma)?** Y / N
- **Does the patient have difficulties or is unable to move self in bed (sit up, turn, change position)?** Y / N
- **Is the patient bedridden or has prolonged bedrest been prescribed (more than a couple of days)?** Y / N
- **Did the patient have surgery or is surgery planned (orthopaedic surgery, neurosurgery)?** Y / N
- **Does the patient have difficulties or is unable to move part of his body (paralysis/burn/pain)?** Y / N
- **Is any part of the patient’s body immobilized (including plaster, splint or traction)?** Y / N
- **Does the patient have respiratory complications?** Y / N
- **Does the patient have muscle weakness or shortness?** Y / N
- **Does the patient have mobility problems (moving around)?** Y / N

If yes to any of the above, please refer the patient to rehabilitation department

**Need for referral to rehabilitation department?** Y / N
Impact of Early Training for Local rehabilitation service providers

• Improved management and long-term outcome of patients
• Prevent and reduce disability
Impact of Early Training for Local rehabilitation service providers

• Capacity building of local staff – technical, management, cultural and financial sustainability
Discussion Points

- Is training of trainers in an emergency situation realistic and worth pursuing? – a priority goal for responding organisations...

- Is there a need for standardized basic rehabilitation training tools in an emergency situation?
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MianZhu County People’s Hospital
Zundao Township Hospital
Hanwang Township Hospital

Collaboration Partners:
Professor Li Jianan – Nanjing University of Rehabilitation Medicine
Care for Children Foundation (CFCF)
Info point:

When opening the disc → click on “run AutoRunPro.exe”

Needed programmes to access the disc:

• Remarks for Windows and Linux users: We recommend to use «Firefox» or «Safari» as a browser, instead of «Internet Explorer» (if using Internet Explorer, some links might be missing and changes in the page format might occur).

• You will also need «Acrobat Reader» (.pdf) and «QuickTime Player» (.mov or .mv4) to be able to read some of the documents from this DVD.

• You can download and install those softwares for free from the Internet (Firefox / Safari / Acrobat Reader / QuickTime Player) or, if you don’t have Internet access, directly from this DVD (Firefox / Safari / Acrobat Reader / QuickTime Player).