Update in disaster management in China

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China
2016-2017 is quiet in major natural disasters
China's emergency management system

- The emergency response law of the People's Republic of China. 2007
- The national emergency office (State council)
- Government departments involved
  - Ministry of civil affairs
  - Ministry of water resources
  - Seismological bureau
  - Ministry of health
  - Ministry of public security
Disaster severity rating system

<table>
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<tr>
<th>Grade</th>
<th>Competent Authorities</th>
<th>Criteria</th>
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| Grade - I Disaster Response | Director of the State Disaster Reduction Commission (SDRC) (Vice Primer of the State Council) | Death: >200  
Evacuation: >1,000,000  
Collapsed houses: >200,000 |
| Grade - II Disaster Response | Vice Director of SDRC (Minister of Ministry of Civil Affairs) | Death: 100-200  
Evacuation: 800,000-1,000,000  
Collapsed houses: 150,000-200,000 |
| Grade - III Disaster Response | Secretary-general of SDRC (Vice Minister of Ministry of Civil Affairs, responsible for disaster relief) | Death: 50-100  
Evacuation: 300,000-800,000  
Collapsed houses: 100,000-150,000 |
| Grade - IV Disaster response | Office of SDRC (Department of Disaster and Social Relief, Ministry of Civil Affairs) | Death: 30-50  
Evacuation: 100,000-300,000  
Collapsed houses: 10,000-100,000 |
Earthquake around China during 2016-2017
Feature of natural disasters

- Type: uncertain
- Location: uncertain
- Time: uncertain
- Severity: uncertain
- Injuries: uncertain
- Rescue action: could be prepared
- Disaster relief: could be prepared
Government Structure: National emergency response

State Council

National Emergency office

National departments

Local government

City level
Town level
Village/street level

NGOs
NGOs related to disasters

- Charities
- Medical
- Social
- Rehab
- Others

Disasters
Important facts

- Local medical persons are also victims
- Local medical facilities are also damaged or destroyed.
- Most important task for local government is to settle the survivors rather than injured.
- Therefore, outside medical forces are critical for the disaster rehab relief.
Lessons in past

- Massive damages
- Lack of resources
  - Finance
  - Rehab manpower
  - Facilities and equipment
- Lack of coordination
  - Government
  - Hospitals
  - NGOs
Sichuan Model of disaster rehab

What we need: to establish a comprehensive rehab facility on site of disaster zone with high efficiency, efficacy and sustainability.

How to organize:

- **Non-government organizations**: to provide financial support
- **Health department and hospital at disaster zone**: to provide basic facilities and some medical support
- **Volunteers in rehab**: to provide manpower.
Chinese Association of Rehabilitation Medicine: Local Health Bureau/ Local Disabled Persons Federation

- NGOs
- Financing
- Health departments
- Governance
- Volunteers
- Health workforce

Rehabilitation Services

- Rehabilitation Medicine
- Physical/Occupational therapy
- Rehabilitation Psychology

Rehabilitation Services:
- Institutional based rehabilitation
- Community based rehabilitation

Health: home visits, community adaption...
- Livelihood
- Social and empowerment
NHV Model

County Health Bureau
County Disabled Persons Federation
Chinese Association of Rehabilitation Medicine

Coordination

NGOs

Training/Equipment

Health departments

Capacity building

Volunteers

Financing

Accountability

Governance

Sustainability

Health workforce

Reimbursement

Rehabilitation service

Multi-disciplinary teams
NHV Model

**Institutional based rehabilitation**

- Rehabilitation Medicine: comorbidity
- Rehabilitation Nursing: pressure sore prevention...
- Physical and Occupational Therapy:
- Rehabilitation Psychology: psychotherapy...

**Community based rehabilitation**

- Inclusion

**Health information**

- Health: home visits...
- Livelihood: employment services...
- Empowerment: self help peer groups...
- Social: personal assistance...
- Education: home exercise training...

**Village Disabled Persons Federations, NGOs**
3 year follow up in 2011

- **Outcome:** 3324 severely injured victims completed institutional rehab and return to community with high satisfaction.

- **Achievement:** Department of rehab medicine established in the local hospitals and community based rehab service is gradually spread out.

- **Sustainability:** Emphasis is shifting from medical rehab to social rehab.
FUNCTIONAL OUTCOMES AND HEALTH-RELATED QUALITY OF LIFE IN FRACTURE VICTIMS 27 MONTHS AFTER THE SICHUAN EARTHQUAKE

ANALYSIS OF FUNCTIONAL STATUS, QUALITY OF LIFE AND COMMUNITY INTEGRATION IN EARTHQUAKE SURVIVORS WITH SPINAL CORD INJURY AT HOSPITAL DISCHARGE AND ONE-YEAR FOLLOW-UP IN THE COMMUNITY

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4 year follow up in 2012

**Outcome:**
- few disabled people (1% total severely injured).
- Depression and pains remain the major complains in health component.

**Achievement:**
- Local rehab system built up (rehab capacity tripled) and rehab professionals increased 5 times more.
Lushan Earthquake in 2013

- **Time:** 8 am, April 20, 2013
- **First reaction post the earthquake:**
  - 1 min: internet news
  - 6 min: government announcement
  - 18 min: on-site rescue started
  - 28 min: army team arrived at earthquake zone
  - 120 min: provincial government leaders arrived at the center zone of the earthquake
Medical rescue and rehab

- 60 min: 5 national medical teams (180 people) 120 min: National medical consultant team (including 2 rehab expert) organized.
- 2\textsuperscript{nd} Day: 183 medical teams (1427 people) arrived and medical rehab early intervention started. The ministry of health documents on principle of early rehab intervention and transferring standard.
- 3\textsuperscript{rd} day: Medical rehabilitation wards established and local rehab resources are sufficient to deal with post earthquake rehab.
- NHV model implemented in the earthquake zone.
International disaster rehab relief

CRDR

- Mobile team
- Guideline and training
- Research
- Funding
- Database
- Diplomatic support
ISPRM-CRDR future direction?

◊ Mobile rehab team

➢ Sustained capacity backup for disaster rehab
  ➢ Manpower
  ➢ Equipment
  ➢ Transportation
  ➢ Immediate reaction for major disaster when needed.

➢ Long term mobile rehab service for poor area
ISPRM-CRDR future direction?

- Database of rehab professional
  - Technical support
  - Consultation
  - Guidance
  - Training
ISPRM-CRDR future direction?

دليل على الجراحات:
- فRACTURES
- Spinal cord injury
- Traumatic Brain Injury
- Amputation
- Peripheral nerve injury
- Crush syndrome
- .......
ISPRM-CRDR future direction?

- Rehab scientific research
  - Long term follow up
  - Physical functioning
  - Psychological functioning
  - Social functioning
  - ICF application

- .......

ISPRM-CRDR future direction?

- Diplomatic procedures
- Funding support
- A center of coordination?