

# Abstracts of Scientific and Invited Papers

## 17th World Congress for Disaster and Emergency Medicine

### (A1) The May 12, 2008 Wenchuan Earthquake: A Primer on China's Emergency Responses and Recovery Planning

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**Background:** This presentation summarizes our ongoing hybrid sociological-geological field research into the May 12, 2008 Wenchuan earthquake. In this extreme geo-disaster, mortality was 69,226, with 274,643 injuries, and 17,923 missing. The human toll was accompanied by significant destruction of the natural environment and the economy, estimated at US\$ 176 billion. A 300 km long surface rupture occurred in the Longmen Mountains along its margin with the Sichuan Basin.

**Discussion:** This disaster was caused by the relationships among (1) towns built in on or in proximity to fault lines, (2) the low earthquake-resistance of residences, schools and hospitals, and other buildings, and (3) the concentration of population distributed along rivers lying below steep-sloped mountains. Mortality and devastation were compounded by post-earthquake landslides. The Chinese central government started a national-level response within 2 hours, upgrading it to the highest national emergency level within 10 hours. Most lives were saved by local people. Military rescue units were activated within minutes of the earthquake, and regional militia, local and provincial units such as the Sichuan Seismological Bureau self-activated immediately. By day-two, 20,000 rescue and engineering soldiers had been deployed. Over 15 large medical treatment, epidemic prevention, and psychological intervention teams responded and more than 10 million volunteers took part in relief activities. In spite of mobilization of the nation's resources, emergency relief was frustrated by formidable obstacles such as cloud cover, a destroyed ground transportation network, loss of communication, and continued geo-hazards in the form of landslide-dammed rivers which threatened large downstream urban centers. Expert national planning for recovery began five days post-earthquake; the plan was promulgated by national law in September, 2008. By the second anniversary of the Wenchuan earthquake, most school and residential construction was completed in earthquake-resistant areas.

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### (A2) Strategies to Recover the Health Care Capacity Post Earthquake in Chile

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**Background:** The earthquake that struck Chile on February 27<sup>th</sup>, 2010 produced profound damage of hospital services with 4249 bed lost especially in the regions of Maule and Bio. The capacity of the health was critically reduced in ability to assure health access to affected people by the disaster.

**Discussion of Interventions:** The first strategy to maintain health services was the deployment of 18 field hospitals from Chilean organizations (Army and Air Force), international organizations and foreign governments. This measure allowed for 533 beds and 16 surgical blocks in the first weeks. There were 14 field hospitals until November. Taking into account the beginning of the winter season, the national government set up another sort of strategy to increase the capacity of the health care facilities: § Strengthening of hospitals without damage that were close to the disaster area. These hospitals were used as referral centers. § Purchasing of 708 beds from the private health sector. § Habilitation of free spaces to be used for inpatients. § Increasing the capacity of home care health programs to release beds. § Construction of some small temporary units to admit patients. § Small-scale interventions to repair damages in hospitals. § Extending the work time until 16 hours in the primary health care facilities. § Improving of the efficient of the using of human and physical resources. § Restructuration of the hospital network that allowed adding 300 new beds.

**Results:** The ministry of health recovered more than 94% of loss beds and 92% of surgical blocks through July. However, it is necessary to identify US\$ 2720 million for reconstruction program and to establish a national strategy of safe hospitals in order to reduce the future costs of the recovery of damaged health care facilities. \*Based on information from PAHO – Chile.

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### (A3) Health Care Facilities Affected by the Earthquake in Chile

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**Introduction:** On February 27, 2010, a 8,8 MW earthquake struck the central and southern coast of Chile, that was followed by a tsunami that destroyed some cities such as