

EAP DRM KnowledgeNotes

Disaster Risk Management in East Asia and the Pacific

HEALTH

By Inaam Haq, Shiyong Wang, and
John C. Langenbrunner¹

STRATEGY AND PRINCIPLES FOR RECOVERY AND RECONSTRUCTION

International experience shows that in the aftermath of a natural disaster, a transition strategy for restoring and maintaining health care services should be developed while planning for rebuilding a better health care system over the next 5–10 years. A rapid assessment should be carried out to determine the population pro-

file and the epidemiological profile. The health needs of the people in the affected areas should be assessed without delay and periodically reassessed, with particular attention to existing and newly emerged vulnerable populations. The needs identified should be addressed in both the transition and reconstruction strategies. The transition phase should prioritize a rapid restoration and revitalization of an undisrupted supply of essential health care services.

Reconstruction is often better led and coordinated by a strong national or provincial authority as this improves implementation effectiveness and equity. The roles and responsibilities should be clearly designed for different levels of government, sectors, communities, and individuals. Transparency and involvement of affected populations and communities will not only enhance design but also ensure effective implementation of the reconstruction plans. In addition, reconstruction of the health sector needs to be sequenced with other sectors (e.g., housing and infrastructure) to ensure functionality.

The Wenchuan Earthquake provides an opportunity for health sector reform in China. First, it is better that reconstruction address the immediate key issues faced by the health sector such as health financing to reduce out-of-pocket expenditures among the affected population; provide better health insurance coverage and benefits; and improve

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accessibility to the poor and other vulnerable population subgroups. Second, the future health care system should be designed to be prepared for and responsive to all major hazards. As mentioned in the Overall Reconstruction and Disaster Risk Reduction notes, the building standards and codes for earthquake-prone zones are critical. Hospitals and other health facilities need to be constructed to higher standards to ensure their integrity and functionality when another earthquake hits. A risk-based, all-hazards approach for emergency preparedness and response should be practiced. Third, the existing health care system in the affected areas may need to be rationalized and streamlined to meet the changed needs. To this end, duplications in the public health care system may be reduced.

INTERNATIONAL EXPERIENCE

Pakistan

A key lesson from Pakistan's response to the South Asia Earthquake in 2005 was how effective coordination helps to ensure efficient implementation in a country where the public sector system is normally neither efficient nor effective. An effective coordination mechanism was operationalized to coordinate multiple partners during the emergency, transition, and reconstruction phases. The

leadership of and coordination by the government were evident during the emergency, ensuring placement of health care teams and temporary hospitals to cover affected populations. Other lessons included:

- **Strategy and design:** Pakistan used a transition strategy to ensure access to basic services and employed multiple approaches, including mobile services, outreach using community-based workers, and facility-based services. The strategy balanced short- and longer-term needs.
- **Planning:** A damage and loss assessment provided the foundation for future planning and implementation. Detailed assessments also helped in reducing redundancies and facilitated decisions to rationalize the number of facilities to be reconstructed.
- **Implementation:** The government focused on guaranteeing essential care during the recovery phase. Reforms focused on things that were easily doable rather than trying to address complicated issues.
- The nongovernmental sector was used effectively by ensuring strategic placement of their services.
- The process guaranteed public participation, transparency, and accountability in both the relief and recovery phases.
- Epidemics were prevented by utilizing early warning systems to track diseases that could cause epidemics (e.g., cholera and typhoid) with a response mechanism.

Turkey

A key lesson learned following the 1999 Marmara Earthquake in Turkey was the state's proactive approach and openness to innovations in the field of disaster risk management, including the creation of the Turkish Catastrophe Insurance Pool. Other lessons that are important from a health sector perspective included:

- The establishment of an effective institutional framework and approach to capacity building for disaster risk management institutions.
- The provision of a budget allocation for the entire duration of the reconstruction period rather than on an annual basis minimized the uncertainties and facilitated the government to move swiftly with the reconstruction program.

OVERALL LESSONS LEARNED

Reconstruction planning

Reconstruction planning begins when the damage and loss assessment (DLA) is conducted. International experience suggests that the DLA is a process, rather than a one-time event, and often goes hand-in-hand with transitional recovery and longer term reconstruction efforts. It is critical to standardize the methodology of the DLA across sectors to allow integrated assessments and reconstruction planning for all sectors. Timeliness and precision must be balanced when conducting a DLA. Damage and loss assessments for the health sector should cover the following key areas:

- *Damage overview and recovery needs:* The impact of the earthquake on health care systems and on human health should be assessed, and rough costs of damage and for reconstruction estimated.
- *Reconstruction and recovery strategy:* The DLA should help in (i) designing an overall approach and the key principles for the reconstruction strategy; (ii) understanding access to primary and secondary health care services by different groups; (iii) targeting populations with special needs; (iv) designing detailed needs assessments and mapping of vulnerable populations; (v) understanding coordination within the health sector and between different sectors; (vi) understanding the capacity of the health sector and health care workforce; (vii) assessing health promotion and



disease prevention efforts; and, (viii) examining and designing seismically safe health care facilities.

- *Reconstruction within the framework of health care reforms:* The DLA should explore and identify challenges faced by the sector requiring reforms and implement them as part of the reconstruction effort, e.g., how to rationalize primary and secondary health care facilities as part of the reconstruction effort, and/or opportunities to restructure the management of primary health care services.
- *Cost estimates:* Estimates should include costs for (i) facility cleanup; (ii) health infrastructure and related equipment; (iii) public health campaigns and trauma mitigation efforts; (iv) human capital needs; (v) medical waste management; and, (vi) increases in the costs of health care treatment.

The overall coordination mechanism and institutional arrangements for reconstruction should be designed before implementation commences. Consultation with different stakeholders and affected communities is imperative in the planning and implementation stages of

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recovery and reconstruction. A cost plan and timetable should be developed and publicized in order to improve accountability and minimize corruption. In addition, a thorough analysis on environmental impact, economic and technical inputs, and human resource capacity should be carried out to ensure that the health sector plan for recovery and reconstruction is practical.

Recovery and reconstruction implementation

Recovery and reconstruction should be divided into two phases, with different priorities for each: (i) transition and (ii) recovery and reconstruction. The duration of each phase will differ from country to country and depends on a number of factors, including the commitment and political will of the government and the financial and technical capacity of the country. The transition phase usually takes 3–12 months; recovery and reconstruction takes 1–3 years or longer. The strategy should design the future vision for the sector. The key principles for recovery and reconstruction of the health sector should include:

- *Equity:* Expansion of service provision to underserved areas, the poor, and other vulnerable population subgroups.
- *Effectiveness:* Increasing access to and quality of key

services (e.g., basic surgical care, laboratory and other diagnostic services, and inpatient care).

- *Appropriateness:* Adoption of new service delivery models to respond to new health care needs if the previous system was outdated.
- *Efficiency:* Greater overall efficiency with savings used to finance some of these measures.

The most urgent need is to ensure access to an essential health care package and public health programs that reduce vulnerabilities and save lives. Primary health care (PHC) services should be easily accessible at the temporary resettlement sites while secondary care services could be provided at designated sites. Early warning alert and response systems for epidemics or any other public health emergency prevention should be revitalized and strengthened. It is imperative to make sure that (i) the poor and other vulnerable population subgroups have access to free health care; (ii) emerging mental health problems are addressed properly; and, (iii) a package of health services for the disabled is provided.

In the Chinese context, it may be appropriate to maintain health care services free of charge and phase these out over time. An exit strategy based upon the damage and loss assessment, careful cost modeling, and per-capita payments could be developed. While the essential package of public health services and activities should be fully financed by the government, funding essential clinical services could combine payments by health insurance schemes, government subsidies, and out-of-pocket payments aimed at less than 20 percent of out-of-pocket expenses for the general population. However, for the poor and other vulnerable population subgroups, free health care services are highly recommended.

Medium and long-term recovery and reconstruction: Broader health care system issues (e.g., utilization and quality of health care services) should be addressed in

this phase. Disasters often provide an opportunity for the health sector to reorganize and reform. Establishment of new hospitals, health care centers, and public health institutions should be rationalized to reduce unnecessary redundancy and unhealthy competition.

The concept of the World Health Organization (WHO) Safe Hospitals Initiative should be embraced to build health care facilities to meet higher standards. This initiative has been implemented in California, Mexico, and other Latin American countries. Independent reviewers should be hired to review the quality of the design of all health care facilities to ensure increased preparedness for the next disaster. Special requirements for hospitals and other health care facilities should be met because these (especially secondary and tertiary facilities) must remain functional immediately after a disaster occurs. This is premised on essential supporting infrastructure (e.g., communications, electricity, transport, water supply, and sewage systems) also remains functional after disasters.

The current public health emergency protocols and relevant plans at all levels should be revised based upon the lessons learned from the Wenchuan Earthquake, and embrace the concept of all-hazard preparedness. It is generally agreed that there are four elements for effective disaster prevention and preparedness: (i) an accurate analysis of hazards and vulnerable populations; (ii) formulation of disaster preparedness and response plans; (iii) communicating prevention and preparedness to the public as well as key decision makers; and, (iv) regular drills and exercises to test and improve the plans.

Discontinued health care services in the affected areas should be gradually revitalized in this phase. Special attention should be given to mental health, prevention and control of non-communicable diseases, and services for the vulnerable and the disabled. Financing mechanisms need to be designed and implemented to protect against catastrophic health care costs during the post-crisis period.



New services should be launched to address the emerging health needs. For instance, post-traumatic stress syndrome and depressive disorder are two mental health problems that may affect a large number of survivors. These conditions often manifest one to three months following the event, and are more likely to be concentrated among women, children, the disabled, and other vulnerable population subgroups. The magnitude of this vulnerability can be quite sizeable: For the countries affected by the 2004 Asia Tsunami, WHO estimates that 20–40 percent of the affected population suffered mild psychological distress, 30–50 percent exhibited moderate or severe distress, and 10–15 percent had mental disorders. International experience suggests that mental health and psychosocial support services are typically delivered through four levels of care: (i) self- and family care; (ii) community mental health services; (iii) care and support outside the formal health sector; and, (iv) mental health care through primary health care.

Because of changed profiles of disease and health care issues, loss of health care workers, and innovations to

In Pakistan, based on the outcome of the DLA, a health sector reconstruction strategy was designed with two overlapping phases, building upon the ongoing work and learning lessons from the relief effort.

be piloted, the existing health care system management likely needs to be reviewed and strengthened. A human resource development plan and proper institutional arrangements should be designed and implemented.

In Pakistan, based on the outcome of the DLA, a health sector reconstruction strategy was designed with two overlapping phases, building upon the ongoing work and learning lessons from the relief effort. The overall theme was build back better. However, for health, the strategy envisaged a revitalized system that would ensure the provision of an integrated essential package of services.

■ *Short term (3–12 months):* The short-term strategy focused on ensuring revitalization and availability of the basic health care services and core public health programs and functions, with attention given to: (i) provision of services for people living in the relief camps; (ii) provision of essential services using mobile services, alternate structure—including prefabricated units, and community-based workers for outreach services; (iii) provision of secondary care services at the appropriate levels; (iv) provision of a special package of health care services for the disabled; and, (v) making functional epidemic prevention programs, and strengthening/rebuilding the surveillance systems and field epidemiology capacity.

■ *Medium to long term (12–36 months):* This included the reconstruction of seismically safe facilities and options for addressing key issues faced by the sector, including low utilization of health care services and inadequate quality of care. Key points included:

- Rationalized reconstruction of seismically safe facilities with integration of smaller units into larger facilities, facilities closed or relocated, and upgrading some facilities based on population size.
- An essential package of services defined and delivered using an integrated approach.
- Emphasis on the needs of vulnerable population subgroups, including undertaking a vulnerability assessment.
- Strengthening of the management and organizational system, including an effective coordinated response involving multiple partners.
- Community-based rehabilitation of the disabled, working with nongovernmental organizations.
- Institutional mechanism for operationalizing rapid emergency and disaster response.

In Turkey, a main dimension of the post-earthquake effort supported reconstruction and interventions to contain damages in the case of similar future events. This comprised developing a mental health strategy and a trauma program for adults, setting up community mental health centers and programs for psychological support, and reconstructing permanent housing and health care facilities in earthquake-affected areas.

Measure results at each step

The monitoring and evaluation (M&E) plan for health reconstruction should focus on a limited number of critical indicators (e.g., Pakistan had three to five), have a clearly defined frequency and time line, and preferably be implemented by a multisectoral team comprising surveyors and evaluators. The findings can be used to assess results, then to periodically revise plans, budgets, and allocations.

RECOMMENDATIONS

Build back better: The objective for recovery and reconstruction should be building the health sector back better. This means the system will have safer infrastructure (e.g., seismically safe hospitals), be prepared for key public health hazards and emergencies, and provide equitable and affordable services to vulnerable groups.

Communications and coordination: Reconstruction should be led and coordinated by a strong national or local authority. Clear roles and responsibilities should be developed and assigned to the different sectors and levels of government. Affected populations and communities need to be consulted during the planning and implementation of the recovery and reconstruction strategy.

Two-phased approach: A transition strategy is needed to bridge the emergency and reconstruction phases. The transition phase should ensure access to an essential health care package and public health programs that reduce vulnerabilities and save lives. The reconstruction phase needs to restore and further-develop service packages and build the health care system to improved standards.

Health sector damage and loss assessment (DLA): A standardized methodology for all sectors will allow integrated assessments. The health sector DLA should be comprehensive, balance timeliness and quality, and weigh current losses against future needs.

Rapid assessment of vulnerable groups: Particular attention needs to be given to map the existing and newly emerged vulnerable populations in both the transition and reconstruction strategies. Service provision and benefits should be expanded to underserved areas, the poor and newly emerged vulnerable population subgroups. The expanded package should be costed and financed; an exit strategy for financing free services to the population at-large should be developed in parallel.

Measure results in every step: The monitoring and



evaluation plan should focus on a few critical indicators to measure results, have a clearly defined frequency and timeline, and preferably be implemented by a multisectoral team comprising surveyors and evaluators. A budget, usually 5–10 percent of the recovery and reconstruction budget, should be set aside for this purpose.

Reasonable expectations: It is highly recommended that post-earthquake health sector recovery and reconstruction should proceed in parallel with health sector reform; however, the post-disaster window of opportunity to introduce institutional and regulatory reforms should be balanced with what can be practically achieved in the context of an emergency recovery project. ■

End Note

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East Asia and the Pacific Region

The World Bank

1818 H St. NW, Washington, D.C., 20433

<http://www.worldbank.org/eap>

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