



KOBE REPORT draft
Report of Session 1.5, Thematic Cluster 1

Disaster Reduction Indicators: safer critical facilities

1. Summary of the session's presentations and discussions

Health care facilities are too valuable to people's health, to a country's economy and to the community from a social standpoint to lose them in a disaster. Keeping hospitals operational consumes nearly two thirds of all public health care spending in Latin American and the Caribbean. Hospitals are an investment of major social significance.

Approximately 50% of the 15,000 hospitals in the Americas are located in high-risk areas. In the last 20 years, more than 100 hospitals and at least 1,000 health care centers in this region were damaged as a consequence of natural disasters, with losses exceeding \$3 billion dollars

Even countries with limited financial resources can serve their populations well by providing them with hospitals and other health care facilities that are resistant to earthquakes, hurricanes and other natural hazards.

It is no longer acceptable for health care facilities to stop functioning after a disaster, or, worse yet, to collapse structurally, hurting or killing the occupants.

To adopt "Hospitals Safe from Disasters" as a national risk reduction policy, and to build all new hospitals and health care facilities with the level of protection that better ensures they remain functional in disaster situations. Appropriate mitigation measures to reinforce existing health care facilities, particularly those providing primary care.

PAHO offers their experience and we assure you of our commitment to support the recommendations of the Conference.

2. Socioeconomic impact of disasters in critical facilities

Ricardo Zapata, United Nations Economic Commission for Latin America and the Caribbean.

There is a need to use a standardized sectoral tool for the evaluation of disaster damage in critical facilities (physical, in assets, capital, stock, material goods) and losses (in flows of goods and services, in income, in costs) by sector analysis comparing the pre disaster, the non-disaster expected outcome and the post-disaster scenario.

The evaluation should identify the gaps to be filled, and a tool for reconstruction strategic planning for critical facilities to be assessed. Safer critical facilities have an implication on diverse indicators of the economic and social conditions in the country or region affected.

- Reduced risk that an individual, household, community, nation or eco-system will not be able to buffer against external threats or shocks
- Protect against potential hazard or danger, exposure to mischance or peril given lack of such facilities (i.e. clean water)
- Availability and appropriate functioning of critical activities

3. Policies and Strategies for vulnerability reduction in critical facilities

Julio Kuroiwa, National Institute of Civil Defense. Peru

A hospital - health care facility - has been upgraded from essential to very essential in the context of Sustainable City Program.

Main issues of Sustainable Cities in urban safety are the influence of site characteristics, urban planning, lifelines systems, essential facilities, urban fire and vulnerability of constructions. The five complementary strategies for the development are: Integrated Urban Infrastructure, microzonation, urban fires control, protection of public services and Lifelines (water, transport, etc.) and essential facilities (Hospitals and schools).

In the event of disasters hospitals, fire stations, police stations, schools are considered essential facilities. Hospitals, even in the case of extreme events, should continue functioning without interruption.

4. Disaster reduction in Water Supply Systems

Surya Narayan Shrestha, National Society for Earthquake Technology – Nepal

Recommended Actions for Disaster reduction in Water Supply Systems are:

- Maintain Accurate Facility maps
- Ensure Inter-institutional coordination for emergency response
- Maintain agreements with contractors, suppliers to provide service and material in case of disaster
- Maintain Redundancy in system operation. Back up generator, extra battery back at sites.
- Maintain Pre-positioning of Drinking water at identified evacuation points. Perform Detail investigation for point source at evacuation sites
- Maintain fund provision for immediate recovery of water supply system to evacuation points
- Wide discussion about the mitigation process

5. School Vulnerability Reduction

Tony Gibbs, Consulting Engineers Partnership, Barbados

All non-Structural Components of schools are affected by earthquakes but only external cladding are affected by wind.

The essential requirements for success are laws, regulations, standards for development and maintenance, effective enforcement and education and training.

Peter Rice's in his book "The Engineer Imagines" states that: *"Others not so closely involved must also be asked to review the project, to question the assumptions and demand explanations. The presence of a competent, dedicated and sceptical checking authority is also very important in this respect."*

Regarding the cost of mitigation we should remember that the most expensive building is the one that fails.

6. Safe Hospitals: an indicator of disaster reduction

Luis Fernando Correa, Ministry of Health, Colombia

Vulnerability reduction in health facilities should not be circumscribed to protect the life of their occupants and the investment itself but ensure that the health facilities must keep functioning during a disaster event. This implies the increase of its capacity to provide services to a higher demand.

We recommend the following indicators:

- National policy development for disaster reduction in health facilities
- Vulnerability analysis
- Retrofitted facilities
- Preventive measures in new infrastructure
- All new hospitals must ensure its functions in disaster situations
- Safe hospitals is an excellent indicator for the period 2005 - 2015

Insurance must complement the mitigation measures, which usually require low investment and have a great impact.

7. Plenary discussion

Mexico. The reduction of risks in critical facilities contributes to governance and accountability. The hospitals should be qualified based on their resolution capacity against disasters. It is not enough that a hospital has a disaster plan but that the hospitals, which are located in high-risk areas to be, certified as safe hospitals. A multidisciplinary collegial body should do this certification process. It is easy to measure that all new hospitals meet the criteria of prevention, mitigation and preparations in order to be certified before it is inaugurated.

El Salvador. It should be a national policy to build safe critical facilities especially for hospitals and schools. Disaster education and training for health personnel should be included at all levels.

Cuba. Disaster reduction policies should be part of international summits. Each country should identify specific strategies and indicators to implement disaster reduction activities.

Honduras. Recommending the countries that comply with building codes that guarantee the continuous service of hospitals, schools and safe water supply.

India. All strategic facilities like hospitals, radio-communications, schools and airports should have strategic programs and 10 year plans for disaster reduction. Disaster prevention should be included in education at all levels. Community based mechanisms for evaluating and monitoring of critical facilities disaster reduction measures should be design and implemented.

Peru. Some indicators should include the elaboration of risk maps, establishing criteria for building codes and giving priority to hospitals, schools and water supply. Each country should classify their professionals according to their knowledge and experience for disaster reduction. There is a need for transparency in the resources allocation and its execution in order to reduce corruption.

Colombia. There is a need to invest in prevention and mitigation privileging the facilities located in zones of high risk. One indicator may be the percentage of international loans invested in disaster reduction.

Kenya. The development of infrastructure should consider the socio-economic differences in the world. The media should have a role to favor the compromise of the national authorities in risk reduction.

8. Primary issues

- Safer critical facilities should be a political commitment and a global indicator for multisectoral disaster reduction. Schools, Drinking water systems and hospitals are huge social investments that should be protected.
- The reduction of risks in hospitals, schools and water supply systems contributes to governance and accountability. Safer critical facilities have an implication on diverse indicators of the economic and social conditions in the country or region affected. Ensuring essential services is a key national policy on disaster reduction and sustainable development. Therefore, all critical facilities must remain operational after disasters.
- Access to health services is an inalienable right and safer hospitals represent a sense of security and social trust. It is no more costly to build a safe hospital than it is to build a hospital vulnerable to disasters.
- It is necessary to adopt indicators that are reachable, visible, easily measurable, and with high social impact. Having a feasible objective highlighting safer critical facilities will give incentive to the national and international community. The objective: "Hospitals Safe from Natural Disasters" is simple, clear and achievable by 2015.

9. Suggested indicators to measure accomplishments

- Proportion of new critical facilities located in lower risk areas
- Percentage of new hospitals built with a protection level that guarantees that they remain functional after natural disasters.

- Number of existing hospitals certified as disaster safe
- Special laws and regulations for disaster reduction in critical facilities
- Portion of investment loans allocated for risk reduction

10. Existing indicators with reference

Number of risk maps that indicate the localization of critical facilities
Millennium Development Goals

11. Partnerships

Countries with great experience in disaster mitigation
National multisectoral disaster prevention organizations
Universities and research institutions
Local authorities
Pan American health Organization
Financial international institutions

8. Additional sources of information

www.imss.gob.mx/dpm/hpcd/fp.html
www.cenapred.gob.mx/
www.cismid-uni.org/
www.indeci.gob.pe
www.nset.org.np/
www.paho.org/disasters
www.eclac.org
www.cepis.org.pe
www.crid.or.cr

9. Name, affiliation and contacts of person filling in the form

Chair: Dr. Felipe Cruz Vega, Mexico

Disaster reduction and Health
Mirta Roses, World Health Organization

Dr. Felipe Cruz Vega
Instituto Mexicano del Seguro Social
fcruz@optical.com.mx

Dra. Maria del Carmen Gonzalez Almeida
Secretaria de Salud de Mexico
Urg-epi@salud.gob.mx

Dr. Ciro Ugarte
Pan American Health Organization
ugarteci@paho.org