What Should We Learn from Recent Earthquakes in Asia?

Claude de Ville de Goyet, MD

Consultant, Retired Director of the Emergency Preparedness Program of the World Health Organization/Pan-American Health Organization

Correspondence:
E-mail: devillec@verizon.net

Keynote address delivered at the 15th World Congress for Disaster and Emergency Medicine, 16 May 2007, Amsterdam, the Netherlands

Web publication: 27 August 2008

This keynote on lessons to be learned from the recent natural disasters in Asia will complement and elaborate further on the points already made eloquently by the first two keynote speakers during this session: Dr. M. Gilbert on building local resilience and competencies, and the call from Prof. E. Rahardjo towards a more efficient, multi-national work on rescue and aid to disasters.

Both speakers stressed the importance of strengthening external aid rather than substituting the national- or community-level capacity. I share the concern of the Indonesian medical professionals feeling marginalized in their own country, as said by Prof. Rahardjo. I also agree with Dr. Gilbert on our duty to build on the remarkable resilience and abilities of local communities. It is feasible, as he clearly demonstrated in local projects.

This presentation will briefly review the main lessons learned from three major natural disasters: (1) the earthquake in Bam, Iran (December 2003); (2) the tsunami in Asia (December 2004); and (3) the Pakistan/India earthquake (October 2005). All three disasters caused considerable casualties and suffering. They have been covered intensely by the media and generated an outburst of international generosity and assistance. This assistance reached its peak with the tsunami response: >US $13 billion was committed, almost half of it through private donations. For once, the customary reason of lack of funding advanced by the humanitarian actors to explain gaps and shortcomings was not available. The lessons can be divided into technical issues and managerial issues.

Technical Issues

The technical lessons learned from the tsunami and earthquakes have been presented in various sessions of this Congress, and some were published in previous issues of *Prehospital and Disaster Medicine*. Therefore, I will only summarize them briefly:

- *Search-and-Rescue (SAR)*—In support of the point made by Dr. Gilbert, most of the SAR activities were carried out by local communities and untrained volunteers. It was a spontaneous and effective effort of solidarity. Specialized SAR teams from developed countries arrived too late to be useful in rescuing trapped victims. In some cases, their comparative advantage, i.e., technologies for identifying victims trapped in confined areas, was not applicable or relevant due to the type of disaster (tsunami) or collapsed buildings (because adobe and mud left no space for survivors). Existing mechanisms to coordinate the dispatch of foreign SAR teams failed to perform as anticipated;
  Dispatching *mobile hospitals* to countries far away remains a very fashionable, but inefficient form of response. The number of field hospitals kept increasing disaster after disaster as if donors were competitively bidding for this visible form of response. Lack of transparency or even misleading claims in the reports published by some of the medical teams, even in peer-reviewed literature, have contributed to maintaining the myth of saving lives with foreign specialized surgical teams arriving days or weeks after the impact. As outlined by Prof. Rahardjo, hundreds of qualified medical professionals from the affected countries were available, but felt marginalized in this process. On the positive side, Dr. Louis Riddez' presentation at this Congress of a comprehen-

sive study of the impact of mobile hospitals is indeed the first step to shed scientific light on a political issue;
- Proper handling of *dead bodies*: The task of handling the bodies of victims of the tsunami truly was overwhelming. Management of >100,000 cadavers calls for measures not recommended in normal times. However, all countries did attempt to collect basic information on the badly decayed bodies (phone, identification, description of clothing, etc.) before unduly rapid and unceremonious mass burials. Thailand was one country that established rules and procedures for obligatory identification of all victims using fingerprinting and DNA techniques. This process is ongoing. Technical support from developed countries, in this example, has strengthened the local capacity to manage their disasters in line with World Health Organization (WHO) recommendations. Apparently, this is one lesson in the process of being learned and acted upon; and
- The myth of inescapable *catastrophic epidemics* following natural disasters lived well in all the three disasters. Particularly, after the tsunami, agencies, including the UN, fed the mass media with predictions of twice as many deaths coming from epidemics than from the tsunami itself. Without a doubt, increased surveillance was called for. When it was carried out using extraordinary means and personnel, it could not be sustained. Meanwhile, resources also were wasted for cholera campaigns in Aceh, Indonesia, where the risk was regarded by the field professionals as non-existent. It unfortunately was an effective ploy to raise large amounts of funds and seen as a win-win situation for agencies able to claim success if these unlikely outbreaks did not materialize.

Managerial Issues

The managerial lessons relate to the management of external assistance. A coalition of 40 agencies, the Tsunami Evaluation Coalition (TEC) commissioned evaluation studies of thematic aspects in the tsunami response such as coordination, effectiveness of needs assessment, impact of response on local capacity, links between humanitarian responses, and long-term recovery and funding patterns. The results are raising serious concern on the future of the "humanitarian industry", to borrow a term used in the Red Cross World Disaster Report of 2004;

The findings include:
- A disproportionate and ineffective international response. In Banda Aceh, the expatriate volunteers reportedly numbered >3,000. Some were seasoned disaster managers bringing a highly valuable skill in short supply locally; some were specialized (water sanitation, drugs management, mental health, communicable diseases, logistics, coordination) and had much to offer. Many expatriates, too many, had only their good will and routine professional skills. They were unprepared to adjust to a foreign culture and environment where many local professionals and volunteers were available, but lacked the minimum logistical support so widely available to the expatriate teams. This last contrast was perhaps the one that our national counterpart and health professionals found most difficult to accept. All external resources (Internet, transport, material) were primarily, if not exclusively, available to international actors and their local staff;
- The quality of donated supplies was inadequate. The problem was not one of getting more supplies, but one of efficiently and transparently managing what had been received. In Pakistan, however, the Ministry of Health rightly insisted to maintain quality control on incoming pharmaceuticals. Somehow, agencies managed to bypass it, leading to an overflow of inappropriate supplies;
- Humanitarian responses appeared to be offer-driven rather than responding to identified needs that could not be met locally. The perceived imperative to mobilize resources led agencies to compete fiercely, hide key information, and, above all, seek visibility. In the tsunami, the excess of humanitarian funding (>US$7,000 per affected person) may have further affected the relations among actors in competition for beneficiaries and opportunities rather than resources;
- International emergency responses appear to be insensitive to evidence. Information, especially from sources outside one's own agency was not used for decision-making. The premium was on immediate, preferably highly visible, action.
- It is worthwhile noting that not all affected countries experienced the managerial challenges in the same manner. India, Thailand, and to a lesser extent, the Maldives, screened and very selectively accepted foreign assistance, avoiding the gross abuses in other tsunami-affected countries. Indeed, no proud country with human resources should accept indiscriminately the outpouring of external assistance of dubious professional standards. Coordinating external assistance in natural disasters is and should remain primarily a national responsibility. International expertise should support, not supplant, this process while guaranteeing its transparency and accountability.

These findings of the multi-million dollar TEC evaluations are not new; indeed, the same lessons are discovered after each major catastrophe and rarely are used for the next disaster. Twenty-five years ago, the Pan-American Health Organization published a series of myths common in disaster responses. Those myths persist to this day.

What is changing is the rapid growth of the humanitarian industry. It is now a large multi-billion dollar industry with huge multinational corporations (UN, Red Cross, and some large NGOs) and small "businesses". As said in the Red Cross 2004 Disaster Report, it has become the "largest unregulated industry".

Decades ago, relief teams were rushing to the site and departing in a matter of weeks or a few months, leaving the area to recovery or development actors. Now, with generous funding, most emergency actors overextend their welcome and stay for years, providing free assistance to their "beneficiaries". Is this in the best interest of the affected popula-

tion? Are those emergency actors best qualified to foster recovery and return to normalcy?

Saving lives is the justification for the mobilization of international generosity. Surprisingly, no effort has been made by the UN or WHO to monitor the secondary mortality of tsunami or earthquakes after the assistance had poured into the affected countries. Documenting how many lives (excess mortality among survivors) actually were saved by the international effort, therefore, is impossible. Experts consulted by the TEC evaluators suggest that the number may be shockingly low compared to the massive investment. Saving lives is critical in hours and days after the impact and is best done by local communities and authorities.

What Can and Should the Participants of the Congress and the Members of WADEM Do?

First, the organizers of this Congress should be congratulated for convening this session where three experts offered a critical and even dissenting voice raising some issues with the prevalent humanitarian approach. In particular, the opportunity given to the Congress participants to listen to the views of our colleagues in the affected countries was highly valuable. This approach is balancing the overly positive assessments of our good deeds as can be seen in the peer-reviewed literature or the posters in this Congress. The specialized sessions of the Congress offered many other opportunities for real debate. This should be expanded in future WCDEMs.

The WADEM should continue to actively participate in the formulation of technical guidelines for international health response. The UN agencies, such as the WHO, may have the formal authority and mandate to issue guidelines, but WADEM members have much to contribute in this process. An example was the participation of the WADEM in the PAHO/WHO guidelines on the use of foreign field hospitals. With the experience gained from the recent disasters, a revision is overdue. The WADEM should stimulate the WHO to initiate this process.

Once lessons are identified or guidelines are issued, individual WADEM members should support them before their own institutions and governments. They should summon their courage and discourage ineffective or counterproductive forms of assistance in the aftermath of the next major, international disaster. Within this emotional and politicized context, it may require going against the flow, but changes never do come easily.

Prehospital and Disaster Medicine should continue its remarkable contribution in publishing articles and promoting further research on the pending issues debated by the international community. It is encouraging to note that systematic research is being undertaken to confirm or refute some of the provocative criticism shared in this keynote. Indeed, the point is not to accept the version presented here, but to raise enough questions, doubts, or concerns for an independent collection of data to feed a broader debate. Intuitive observations should not remain good enough in disaster medicine.

Standing up for more professional responses to future disasters is excellent, but not sufficient. A scientific association, such as the WADEM, cannot remain passive in the next emergency. The WADEM should develop and advertise a capacity for field research and operational investigation in the immediate aftermath of a major natural disaster. There already are too many volunteers to provide medical care or other health services, but qualified observers, evaluators, and researchers are in short supply. Data are perishable and may not be available for lessons learned nine months after the disaster. The WADEM should contribute with a core of high level experts available for the UN system, research foundations, or bilateral agencies to learn as much as possible from the ongoing response for the benefit of the populations to be affected by the next disaster. Only through systematic independent observations and research will we learn how to improve and ensure that lessons indeed are learned, and myths do not survive.

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https://doi.org/10.1017/S1049023X00005926 Published online by Cambridge University Press