

as description of findings at exposure, providing a base for anatomical triage. The “patients” were taken from a real scenario. All parameters except the one studied (accuracy and efficiency of the triage) were strictly standardized. The outcome was given as preventable deaths and complications, based on given times within which certain measures had to be taken to avoid mortality and severe complications.

Results: With this model, it was possible to compare different methods of triage, and also triage performed by staff of different level of training and experience. The differences in methodology and experience were correlated to differences in outcome with regard to mortality and complications.

Conclusions: This model can be a useful tool not only for the evaluation and comparison of triage methods, but also for validation of training in triage for staff of different categories.

Keywords: mass-casualty incident; patients; research; simulation model; triage

Prehosp Disast Med 2009;24(2):s144–s145

(K119) Priority Tags for Prioritizing Disaster Victims—The User’s View

Monica E. Rådestad; Helené Nilsson; Maaret Castrén; Anders Rüter; Leif Svensson; Dan Gryth

Department of Clinical Science and Education, Södersjukhuset, Karolinska Institutet and Stockholm Prehospital Centre, Stockholm, Sweden

Introduction: Although priority tags are considered important in all training and education, there are few reports on their actual use in real incidents. The aim of this study was to compare attitudes on the use of a simple priority tags to the SMART Tag.

Methods: A questionnaire was answered by ambulance personnel and the medical teams from hospitals in Stockholm, Sweden, regarding when the priority tags were supposed to be used or were used in their organization. The second questionnaire was conducted during a large-scale disaster exercise at Stockholm Arlanda Airport. The second questionnaire focused on their experience of the use of SMART Tags during the exercise. Emergency ward personnel are going to be interviewed on how SMART Tag information is communicated when ambulance crew arrives at the hospital.

Results: In the first questionnaire, 211 out of 409 (51%) answered that they had used priority tags in training situations. Of all 409, only 36 (9%) answered that they had used tags in a real incidents and 142 (35%) replied that they never had used priority tags. The answers revealed some doubtfulness of when to use priority tags. In the second questionnaire, many of the participants stated that priority tags should be used in routine operations compared with how they are used today.

Conclusions: It is necessary that the field personnel applies the triage scheme and uses the priority tags, not only during a disaster, but also during smaller emergencies, to maintain familiarity. This secures that the tags are used correctly in real disasters.

Keywords: disaster health management; disaster; priority tags; Sweden; triage

Prehosp Disast Med 2009;24(2):s145

Oral Presentations—Disaster Reports

Disaster Relief when Access to the Disaster Area is Denied—Lessons Learned from Cyclone Nargis in Myanmar (Burma)

Rannveig B. Fjaer

Joint Medical Military Services, Oslo, Norway

Introduction: When Cyclone Nargis hit the Ayeyanwadi delta of Myanmar on 03 May 2008 at a speed of 190 km/h, nearly 140,000 people lost their lives and approximately two million were left homeless. As an additional challenge, the military regime of Myanmar denied any relief organizations or workers outside Southeast Asia access to the disaster site.

Methods: During a one-week mission to the former capital of Yangon beginning one month after the disaster, relief provided to the affected population was studied. The working methods and effectiveness of a small non-governmental organization (NGO) already established in Myanmar were evaluated.

Results: The long visa queues of relief workers gave organizations already working in Myanmar a great advantage. New strategies involved the rapid employment of personnel from Southeast Asia for fieldwork. Improved administrative procedures made the field teams work more effectively. The NGO studied 30 rapidly engaged, new, local, health workers, sufficient for five medical teams to work in the field.

Conclusions: In spite of denied access to the disaster field, United Nations organizations and NGOs were able to initiate an effective administration and support to the many teams including >80 medical teams sent to the disaster site. The restricted movement gave more time and resources to relief planning, which is of importance for future incidents. Smaller NGOs were able to benefit from the improved administrative procedures introduced in the process.

Keywords: Burma; Cyclone Nargis; disaster; disaster management; health; limited access; Myanmar

Prehosp Disast Med 2009;24(2):s145

Cyclone Nargis: A Unique Disaster Response

Fatimah Lateef

Singapore General Hospital, Singapore, Singapore

In May 2008, Cyclone Nargis tore across the southern coastal regions of Myanmar, pushing a tidal surge through villages. The 12-foot wall of water and wind speeds of >200 km/hr killed tens of thousands of people and left hundreds of thousands homeless and vulnerable to injury and disease. Of the 7.35 million living in the impacted townships, 2.4 million were affected. The Delta region, Myanmar’s Rice Bowl, was severely damaged. The low lying villages were submerged with widespread destruction of homes, critical infrastructure of the villages, roads, ferries, water, and fuel and electricity supplies.

Team Singapore provided assistance to at least 10 different villages in Twante Township. The team operated mobile clinics from warehouses, temples, schools, or other makeshift buildings. The journey to the remote villages required between 1–2 hours by road or by boat. The team

also ran mobile clinics at the township hospital, the rural healthcare centers, and an orphanage. For the nine operational days, Team Singapore treated a total of 4,710 patients: 62% (2,921) were adults, while 38% were pediatric patients (<12 years old). The most common diagnoses among adults were: Upper respiratory tract infection (URTI) (27.2%); gastritis/gastroenteritis (18.9%); and lower respiratory tract infection (LRTI) (13.8%). The most common diagnoses seen among the pediatric group of patients were: gastritis/gastroenteritis (29.2%); URTI (28.7%); and LRTI (7.5%). Additionally, 6.3% adults came to seek help for long-standing, chronic medical problems (i.e., hypertension and diabetes mellitus). Post-traumatic stress disorder and psychological manifestations were seen in 8.1% of adults and 2.8% of children, while injuries and wounds were treated in 10% and 12% of these groups respectively.

This presentation will share the team's unique experience in the humanitarian response.

Keywords: disaster response; Cyclone Nargis; medical assistance; Myanmar; Team Singapore

Prehosp Disast Med 2009;24(2):s145–s146

Use of a Common, Inter-Sectoral Template for Observer Reports of Crises

Per E. Kulling,¹ Hans Andersson,² Thomas Gell,³ Christina Nordensten,⁴ Susannah Sigurdsson⁵

1. European Commission, Health Threats Unit DG SANCO, Luxembourg, Luxembourg
2. Swedish Civil Contingencies Agency (formerly Swedish Emergency Management Agency), Stockholm, Sweden
3. Swedish Civil Contingencies Agency (formerly Swedish Rescue Services Agency), Karlstad, Sweden
4. Swedish National Food Administration, Uppsala, Sweden
5. Swedish National Board of Health and Welfare, Stockholm, Sweden

Introduction: The use of a common template for observer studies is a way of structuring the experiences gained (lessons observed and learned) from such studies. This facilitates the comparison of reports within one's own field as well as between different sectors. It also facilitates the implementation of joint observer activities and joint observer reports, promoting more comprehensive and holistic learning from the events.

Methods: Using the Utstein method for studying disasters and the Swedish Disaster Medicine study organization (KAMEDO) as an inspiration, a number of Swedish governmental authorities and organizations compiled a template for presenting standardized observer reports. The following titles have been identified to be included: (1) Title; (2) Preface; (3) Observers and Authors; (4) Summary and Experiences; (5) Introduction/Material and Methods; (6) Hazard; (7) Background (including pre-event status and preparedness); (8) Event; (9) Damage; (10) Disturbances; (11) Responses; (12) Recovery and Development; (13) Discussion; (14) References; (15) Appendices; (16) Keywords; (17) Index; and (18) Abbreviations.

Results: This template has been used successfully for observer studies within the health sector (evacuation of Swedes from the war in Lebanon, 2006, a power supply failure at a major university hospital in Stockholm, 2007),

within the food sector (Cryptosporidium contamination of water supply in Ireland, 2007, consequences for water supply from floods in the UK, 2007, sewage contamination of water supply in Finland, 2007) and within crisis management and rescue services sectors (floods in the UK, 2007, sewage contamination of water supply in Finland, 2007, wild fires in California, 2007)

Conclusions: The use of a common, standardized template for the documentation of lessons observed and learned from major disasters/crises has proven useful. In addition to enhancing the completeness and learning value of the reports, it also has proven to be a useful tool for stimulating intra-sectoral cooperation and learning.

Keywords: crisis; disaster; lessons learned; lessons observed; observer report

Prehosp Disast Med 2009;24(2):s146

Poster Presentations—Disaster Reports

(C21) Bampoor Flooding: Case Review

Amir Mirbaghi,¹ Ebrahim Ebrahimi,² Hamed Sarani¹

1. Zahedan University of Medical Sciences, Iranshahr, Iran
2. Zahedan University of Medical Sciences, Zahedan, Iran

Earthquakes and flooding are two major incidents in Iran. Each year, several storms occur in Sistan–va–Balouchestan state due to the hot and dry climate and the geographical characteristics of the region. Flooding in Bampoor destroyed many homes, but with no human loss. The objective of this study was to analyze crisis management during the Bampoor flooding in January 2008. Up to 125 mm of rain fell in three days, compared to 143 mm in the last 12 months. Being unable to accurately estimate flood risk and magnitude brought catastrophic results. Flood warning notification should be adjusted according to local culture and understanding in order for it to be effective. All decisions should be considered as being effective in all stages of rescue operations. A solution in one phase can change into a serious threat in the next phase, endangering lives. Integrated and focused management in distributing aid is essential to ensure effective aid assignment. Climatological characteristics should be privileged during reconstruction. Psychological support is essential to the empowerment and rehabilitation of victims. Unrealistic promises can put a negative effect on the trust of the affected population. Crisis management skills in Iran must be developed further. Regional and cultural adaptation is recommended to administer relief.

Keywords: Bampoor flooding; disaster; flood; Iran; planning

Prehosp Disast Med 2009;24(2):s146

(C22) Reassessment of the Bam Earthquake Five Years Onward

Masoud Saghafi Nia,¹

Mohammad Hosein Kalantar Motamedi,¹ Farzad Panahi¹

1. Baqiyatallah Medical Sciences University, Trauma Research Center, Tehran, Iran
2. Azad University, Tehran, Iran

Background: An earthquake measuring 6.6 Richter in 2003 devastated the historic Iranian city of Bam. During