

32 The Integration of the Regional Hospital in Belgian Disaster Planning: Some Practical Aspects

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The role of the regional hospital consists not only of adequate diagnosis and treatment of trauma patients, but also of stabilization and preparation for transport of those who need more specialized help such as neuro- and cardiac surgery.

A practical analysis is made for the H Hartkliniek-Eeklo, which is a medium-size (214 beds) regional hospital situated in the north of Flanders (Belgium). Seven fire brigades protect a rather rural population of 150,000 people. They provide support in three private and four public ambulances. During 1991, 2,422 trauma patients were brought to the emergency service of the hospital with a maximum during autumn. The geographical origin and temporary distribution of these patients and also the dedication of the private ambulance services are described. A scheme is given for the hospital disaster plan. The relationship between the hospital disaster plan and work of fire-brigades, Red Cross, Government, Army, Police, and other emergency services, and their impact on its activation are also described.

33 Guidelines for Hospital Disaster Plans

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Currently, hospitals in the United States are required by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) to have internal and external disaster plans. However, JCAHO does not make detailed recommendations concerning disaster preparedness plans. Therefore, there might be a wide variability in the level of preparedness from one institution to another. In a survey of hospitals in Osaka, Japan,¹ this was found to be the case. A similar study in the United States currently is in progress. The following are general guidelines for external hospital disaster preparedness based upon the experiences observed by studying medical response to disaster.² It is suggested that hospitals focus on three important areas that frequently fail in disaster events:

- 1) hospital organization;
- 2) lifeline vulnerability (electrical, gas, and water supply); and
- 3) food and medical supplies. These three categories will be discussed in detail.

References:

1. Kai T, et al: Hospital disaster preparedness in Osaka, Japan. *Prehospital and Disaster Medicine*, 1993 submitted for publication.
2. Ricci E, et al: Assessment of prehospital and hospital response in disaster. *Critical Care Clinics* 1991;7:471-487.

34 Fire Department Assistance in Development of a Hospital Disaster Plan

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Objective: To describe the results of the first inspection carried out by the fire department of this hospital. It is the newest in this community, having been open for only five years.

Methods: The hospital security committee includes a special group for internal disaster prevention which began its work by asking members of the fire department to conduct a detailed inspection of the hospital relative to security systems. After three unannounced visits, conclusions were reported to the fire chief and to the hospital administrator. This report will present the main problems detected, with descriptive photographs.

Results: The fire department reported 21 deficiencies; five safety problems required additional work toward achieving resolution. The remaining deficiencies involved cleaning, safety, or storage problems. A summary of these deficiencies classified by affinity groups includes: inadequate firestairs at psychiatric areas; cleaning deficiencies at laundry area; non-existent emergency exit at the patient's clinical record area; inadequate storage, conduction, and use of propane both in the laboratory area and kitchen; irregular dust placement; smoking outside of permitted areas; lack of emergency designation and non-existent alarm system in closed and deserted areas (clinical records, hospital store); others—blockade in parking access, insufficient pressure for water pumps, blockade of fire extinguishers, non-existent plan to stop medical gas supply in the event of a disaster, and lack of a general disaster plan.

Conclusion: The fire department should conduct at least one annual visit to every hospital for the purpose of reporting deficiencies related to disaster prevention.

35 Comparative Analysis of Physician's Work of the Specialized Emergency Teams

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Evaluation of complex professional knowledge and theoretical skills has been achieved through the use of computerized scoring among 126 physicians engaged in the following specialized emergency teams: cardioresuscitology emergency team (CR), toxicology team, pediatric team, intensive team, midwifery team, and the general emergency team.

Among a total of 150 monthly calls registered with the CR team, the average time required for a patient's treatment was 80 min; the general emergency team recorded 400 calls, each averaging 25 minutes. However, the number of deaths registered by the CR team was 3.2 times greater than those registered by the general emergency teams. General emergency

teams called upon specialized teams for assistance in 24% of the cases, while physicians of toxicology teams required assistance from CR teams in 6% of cases; intensive physicians teams required assistance in 2% of all cases; and physicians of anti-shock teams in 5.4% of all cases.

Professional skills assessment among emergency team physicians having more than five years of service indicated that the lowest level of professional knowledge occurred in the area of cardiopulmonary resuscitation (CPR). The test was evaluated using a five-point computerized scale. The average CR physician's score was 4.1, while the average general emergency team physician scored 2.8. Practical skills evaluation demonstrated satisfactory knowledge among the teams as follows: CR physicians, 63%; toxicology teams, 21%; and general emergency teams, 12%. CR team physicians possessing practical skills were under the age of 47 years (87%).

Computerized evaluation and scoring demonstrates the low level of training which partially accounts for mortality rates. Computer evaluation will be conducted annually and results will determine the rate of financial remuneration.

36 Russian Development of the On-Board Disaster Communications System

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The experience obtained from the mitigation of major disasters on the territory of the former United Soviet Socialist Republic (USSR) and the recent disaster on the territory of the Russian Federation indicates that the conditions for organizing emergency medical services in this country are very unique. This reality makes it necessary to establish life-saving systems and the technical means for these systems, within principles and characteristics that differ from other analogous systems.

Thus, a problem of compatibility of such systems may arise when addressing the consequences of major disasters and mutual collaboration of several countries is required. The analyses of the experience of mitigating disaster consequences in the Russian Federation, on the basis of mathematical modeling, made it possible to define the organizational principles of emergency medical services and to identify the complete set of medical equipment to be carried on-board the mobile transportation vehicles.

The equipment is being worked out for two types of transportation (the MI-8MT helicopter and the screen-plane for search and rescue) by the Radar MMS Company. This presentation provides information about this development.

38 Principles of Cooperation and International Coordination in Disaster Relief

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In cases of disaster, mostly occurring in the southern hemisphere, the more advanced nations can provide effective assistance to the regions involved if several conditions are made clear. International relief actions can start only by request of the country involved in the disaster, but this must be decided at a very early stage.

The size of relief actions must be explored by an international team of experts (International Committee of the Red Cross, United Nations Organization) that will coordinate the different efforts. Sponsorship within continental regions should be considered in order to avoid overseas transportation.

After having explored the amount of assistance required, including the existence and utility of infrastructure at the site, the extent of medical assistance can then be determined. The needs of the task force must be anticipated, as well as the possibility of recruiting native people in other functions (including interpreters). Different aspects must be considered in different situations requiring immediate assistance, such as survival of rescue teams and the long-term tasks of rehabilitation and reconstruction.

39 Special Voluntary Auxiliary Corps (SVACs): Basic Support of Emergencies

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The current world trends regarding the commitment of communities to related political, racial, and religious confrontations are analyzed.

Considering the historical perspective, a solution is proposed based on conversation with and sustained understanding of young people to participate in the development of organizations called Special Volunteers Auxiliary Corps (SVAC). It is necessary to direct the energy of young adults to realize their ambition in ways that recognize their desire to be heroes and guardians of the ecosystems while activating their interest in participating in a response to emergencies and disasters of all kinds, in any location.

SVAC

I. Command

A. Communications

1. Prehospital medicine
2. Hospital medicine
3. Engineers, remote transport, traffic
4. Public relations, media
5. Preventive medicine, epidemiology, psychology, social assistance
6. Legal medicine

B. Civil Defense