

Disaster Medicine And Disaster Planning: Swedish Perspective

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Abstract

In Sweden, there has long been a great interest in the planning, education and training in disaster medicine, in spite of - or maybe because of - the fact that we have neither experienced large-scale disasters for a long time nor any war for almost 200 years.

WHAT DO WE MEAN BY THE TERM "RISK"?

When we compare risk levels, we have to take into account both the probability of an accident and the possible consequences of such an event. Risk is the product of probability and consequences.

Small accidents with a limited number of victims occur more often than large-scale disasters. The probability for a very large number of victims to occur is higher for natural than for man-made disasters. However, man-made disasters are more common than large-scale natural disasters in Sweden and some other European countries.

Thus, the risk for a certain number of people to be killed during a certain amount of time may be of comparable size for two events, one with high probability and limited consequences - such as a traffic accident - and the other a large-scale disaster with low probability, but with severe consequences - such as an accident in a nuclear plant of the Chernobyl type.

DEFINITION OF A DISASTER

We define a disaster as a situation with an imbalance between the acute needs and the locally available resources. In these cases, special reinforcing and coordinating measures must be taken, in order to keep the quality of medical treatment as close to normal level as possible.

BASIS FOR MEDICAL DISASTER

PREPAREDNESS

Preparedness for large-scale disasters should be based on

- first of all - local resources immediately available
- secondly - local and regional reinforcement when needed
- under all circumstances - command, communication and coordination.

SWEDEN'S MEDICAL SYSTEM AND DISASTER RISKS

Sweden has about 8,5 million inhabitants, and is administratively divided into 24 County Councils - each with a regional parliament and the right to take taxes - which are responsible for and manage most medical care in our country.

Sweden is a vast country. The distance from the Northern to the Southern end is about equal as from the Southern end to Rome in Italy. The northern part is scarcely populated, while the capital region around Stockholm and the part of the country south of Stockholm are more densely populated. On the Baltic island Gotland, the population is scanty in winter time, while the number of inhabitants may increase 5-fold during vacation time in summer.

Car accidents - mostly not disastrous - account for about 500 deaths and 20 000 casualties each year. About 50 persons die due to train crashes each year. Few large air crashes with many victims have occurred in recent years, but a number of disasters have occurred with passenger ferries.

Industrialization has created new risks - storage, processing and transportation of large amounts of highly flammable, explosive, radiological and toxic chemicals. About 1 400

patients with burns need hospital care every year, but only about 200 need specialized care in burns units, with about 40 beds altogether, half of them with intensive care facilities. In additions to these beds, about 300 extra beds in intensive care units and wards for plastic and hand surgery would have to be used in case of a large burns disaster. If wards for general surgery are also used, another 1 500 beds could be used.

Although Sweden has hitherto escaped large chemical and radiological disasters, Swedish rescue services are engaged in about 1 500 actions yearly due to chemical accidents, generally due to the release of ammonia, chlorine, hydrochloric acid or sulfuric acid. Decontamination of non-volatile contaminants as early as possible is essential. Primary decontamination is performed by rescue services, but also hospitals need decontamination facilities to avoid contamination inside the hospital. Personal protection - clothing and masks - is also needed for the ambulance personnel and for the personnel at the emergency departments.

SWEDISH MEDICAL DISASTER PLANNING

The National Board of Health and Welfare (NBHW) is a government agency, an expert authority for medical care and social welfare. Its primary task is to supervise and follow up the quality of medical care and social welfare. Another task is to implement the defense decisions of the Swedish Parliament, and see to that the civilian medical care has a sufficient preparedness for disasters and war.

The NBHW has published national guidelines for medical

disaster preparedness, and initiates education and training of doctors and other personnel in the field.

Disaster plans should be made for each county council as well as in each hospital and primary care district. The plans should be continually revised. In addition information and training are required for all staff involved.

Collaboration among those responsible for various parts of the rescue operations (mainly rescue service, police and medical care) is of great importance, and is effected partly during the planning phase, through plans and agreements, training and exercises, and partly during an actual operation.

An important part of the planning is the psychology-psychiatry disaster management groups are set up in all hospitals, and also in local communities.

These national guidelines are to be put into practice by the County Councils. In case of a large disaster, which cannot be coped with by a single County Council, the National Board of Health and Welfare is noticed, and will be engaged in coordinating information and advising personnel with medical and administrative responsibilities.

The National Board is also involved in evaluating the emergency preparedness as well as the emergency response when a disaster strikes. Such post-disaster studies include evaluation of health outcomes, impact of emergency-management interventions and adequacy of relief efforts. Reports are published in a special series (KAMEDO-reports).

References

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