

ter situations. One could even plan to set other laws and regulations aside. Furthermore, to some, the term "disaster" is equal to "alarming hospital employees" and the term is not connected directly to treating patients.

I call for a clarification of terms by the authorities that have defined them, and also on what these terms mean during a preparedness situation. This should be done in the form of a regulation.

I envision that, as a starting point, we should describe the normal situation, when the emergency preparedness is tailored to normal needs, and the service level is adequate. The crisis could be defined as a situation in which the demand is increased to a level that implies reorganization of resources and calls for assistance, but where it still is possible to meet the population's need for necessary health services according to normal criteria of adequacy and within the framework of laws and regulations.

The term "disaster" is reserved for situations in which one is unable to give necessary treatment despite reorganization and other efforts within crisis circumstances, and where it is necessary to apply for exceptions from various laws and regulations that secure an adequate health system during normal circumstances.

Keywords: definitions; demand; disaster; health system; justice; laws; Norway; organization; preparedness; regulation; supply

Lindheim NJ: What is a disaster? *Prehosp Disast Med* 2004; 19(S1):s12.

When Do Infections Become Disasters?

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Infections have accompanied humankind forever and have significantly influenced their historical development. Few, if any, other environmental factors have influenced population growth and instigated population migration to the same extent as have infections. The bubonic plague in the early middle ages, the repetitive smallpox epidemics during the 19th and 20th century, and the HIV epidemic today, demonstrate the power and volatility of epidemics in spite of the society's repeated attempts to eradicate them. During a short period in the 1970s, it was believed that infections could be controlled, but soon thereafter, new diseases like HIV, modified diseases like tuberculosis, and diseases in new areas like West Nile in the United States (US) proved otherwise.

Infections with magnitude of a disaster distinguish themselves from traditional disasters in many ways, (e.g., large-scale accidents, earthquakes). During most other disasters, a large number of people are hurt during a very short time period, and thereafter, no new casualties are added; infections, however, produce new cases over a prolonged time span, even months and years. Other disasters are easily recognized, whereas an epidemic can have a slow, creeping start, and consequently, it may be very difficult for society to organize their resources optimally. Infections create significant disturbances in a society since everybody feels threatened, which then, also increases the need for adequate information placing a heavy burden on different authorities. Infections also may change their properties during an ongoing epidemic, which again makes established countermeasures irrelevant and ineffective.

The conditions for new epidemics of disaster proportions are increasing. New infections are emerging at an increasing speed. A population increase and an increase in cross-continental travel promote all the conditions for infections to spread worldwide (e.g., SARS). War and deteriorated economies destroy the public health systems in many countries, which again reduce the possibilities for protection.

On the positive side, an increasing number of authorities, countries, and international organizations are becoming more and more aware of the threat, accentuated by the recognized threat from bioterrorism. This has led to increased international collaboration, which strengthens the possibility of fighting future epidemics.

Keywords: bioterrorism; containment; disaster; economy; epidemics; infections; war

Tegnell A: When do infections become disasters? *Prehosp Disast Med* 2004;19(S1):s12.

Selection and Training of Personnel for Disaster Management

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The largest voluntary organization in Sweden is the National Red Cross comprising 300,000 members and 40,000 active volunteers. The Red Cross movement originated from the need to have dedicated and trained people who were equipped to care for war wounded during and after battle. In several countries, this has extended significantly into programs encompassing training not only on how to handle war wounded, but also in addressing emergency medical problems, accidents, and natural disasters.

In Sweden, the Red Cross carries the main responsibility for promoting first-aid training among the lay people and has, during the last ten years, trained close to one million people, a many of them school children. Additionally, there are approximately 130 permanent first-aid groups throughout the country, each comprising 5–6 persons. The Red Cross also trains people in crisis management. Home guard is another large voluntary organization, which has 4,000 trained healthcare workers. This is complementary to the society's other aid and rescue systems.

Also, internationally, the Red Cross is the largest voluntary organization. Especially with regard to international missions, their prime concern is to identify persons with the relevant education, proficiency, and qualifications enabling them to work under sometimes dire circumstances. Preparations should include general knowledge on material, communication, legal aspects, and also in depth insight on the importance of mutual respect among all fellow human beings and their respective cultures. Therefore, the International Red Cross has developed a "Code of Conduct," which all delegates are committed to following.

In my capacity as a surgeon for the International Committee of the Red Cross, I have been active in many armed conflicts, but most recently, I have been active as a teacher. For the last two years, I have been affiliated with the Swedish Defence Forces and contributed to the training of our troops earmarked for international missions. To identify the proper persons for the job and to prepare them properly is a prerequisite to succeeding when presented with challenging missions and will be more extensively discussed during the presentation.

Keywords: code of conduct; conflicts; crisis; disaster management; first aid; management; Red Cross; Sweden; training

Molde Å: Selection and training of personnel for disaster management. *Prehosp Disast Med* 2004;19(S1):s12–s13.

The Response of the Health and Social Welfare System to National and International Challenges

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Today's most severe threats to the health and welfare of society primarily involve potential nuclear, biological, and chemical (NBC) terror, mass casualties, global contamination, and vulnerable infrastructures. The challenges these threats present to the healthcare systems comprise four parts: (1) incidents that are significantly different from our daily medical problems (e.g., NBC events, accidents, or terrorism with unfamiliar types of casualties which demand special treatment); (2) accidents where the number of casualties with "normal" injuries exceeds what is covered in the traditional contingency and preparedness plans (e.g., fire in ferries, train or aircraft crashes, in which a large number of casualties demand enormous healthcare resources); (3) situations in which a complete hospital or significant parts of a hospital is rendered dys- or non-functional (e.g., fire or contamination); and (4) situations in which medical supplies to the country are disturbed or stopped (e.g., production failure or an international crisis that challenges a marginal buffer capacity ("just-in-time" principle)). A combination of these situations/events will challenge the Norwegian Health Care Preparedness significantly.

With regard to the prehospital emergency medical service, there has been a significant increase both in capacity and competence during the last 10–15 years. This has been demonstrated during the large accidents (e.g., the sinking of *M/V Sleipner*, the train collision at Åstas, and also this year, the capsizing of the ship *Rocknes*.) Nevertheless, there still is concern regarding the hospital capacities, both intensive care treatment and the overall buffer capacity to deal with larger events and accidents, since hospitals, and especially the intensive care units, are running at full capacity to cover their everyday challenges. With regard to national challenges, this is especially worrisome within contingency and preparedness against terrorism, management of information to relatives and the media, and development and coordination of psychosocial support functions. Of the international challenges, infectious diseases like SARS have demanded much from Health Care Preparedness. Further, uncertainties with regard to guaranteed supplies of drugs and medical commodities, represent a challenge forcing joint response from different countries and activities.

Keywords: accidents; buffering capacity; emergency medical services; healthcare system; nuclear, biological, chemical; prehospital; response; social welfare system; terrorism

Larsen BI: The response of the health and social care to meet national and international challenges. *Prehosp Disast Med* 2004;19(S1):s13.

Local Contingency Preparedness Plan—How to Make It Functional

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This presentation focuses on contingency plans for the Municipality Health Care Preparedness—an algorithm produced under the auspices of The County Senior Representative and the County Department of Health. This contingency plan is a good example of how, through a proper algorithm and structured design combined with administrative and professional content, unwanted events, crises, and disasters can be handled in a rational way. Consequently, the contingency plan can become a tool applicable for healthcare preparedness.

Further, the presentation focuses on the use of risk and vulnerability analyses as a tool to create a platform to facilitate future work to develop well-functioning crisis management and contingency plans.

A proposition to clarify the most commonly used/misused terms and definitions within the planning for crisis management plans also will be presented for the panel discussion.

Keywords: algorithm; contingency plan; disaster; emergency plan; healthcare preparedness; planning

Bjerkaas E: Local contingency preparedness plan—How to make it functional? *Prehosp Disast Med* 2004;19(S1):s13.

Electrical Power Failure Experienced in the Greater Copenhagen Metropolitan Area

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Tuesday, 23 September 2003, at 11:30 hours, eastern Denmark experienced an electrical power outage. It took some time before the full scope of the power outage was acknowledged. The power cut lasted 3–7 hours for different regions. During this time period, eastern Denmark had ample time to identify which of the contingency plans worked and which did not. Especially with regard to the communication and power supply to medico-technical equipment in private homes, the problems could have become very worrisome. People were stuck in elevators and stationary pumps did not work. Fortunately, the time of day and the limited duration of the power outage made it possible to handle the emerging challenges without serious problems. The dispatch center for Greater Copenhagen experienced a very busy period, especially since a significant number of people called to inform them that there was no electricity in their area. Further, several automatic fire alarms were activated to the dispatch center. In the aftermath of the power outage, a report from the Copenhagen Authorities and the Capitals Joint Hospital Organization developed necessary recommendations of actions needed to mitigate the consequences of potential (future) electrical power cuts.

Keywords: communications; Copenhagen; dispatch center; electrical power failure; medical equipment; power supply

Brydholm SV: Electrical power failure experienced in the greater Copenhagen metropolitan area. *Prehosp Disast Med* 2004;19(S1):s13.