

# III NORDIC CONGRESS OF EMERGENCY AND DISASTER MEDICINE

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## ABSTRACTS OF INVITED AND SCIENTIFIC PAPERS

It is quite natural to have close cooperation between the Nordic countries in the field of Emergency and Disaster Medicine. We actually need each other in order to maintain a sufficient preparedness in this geographical area. We also can make research, education, and development together.

Fortunately really large-scale disasters are very rare in our area, but even in an accident, there can be a discrepancy between resources and needs. Thus, disaster medicine approaches emergency medicine in its features. Thus, the combination of emergency and disaster in our congress is justified.

We are very happy to see so many free paper presentations from different fields as well as in treating fresh aspects in invited presentations. It is important to get all this knowledge both for participants and absentees in printed form in a good international journal, because *WERBA VOLANT, SCRIPTA MANENT!*

Matti A.K. Mattila  
Chairman of the Scientific Committee

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### Invited Papers

#### How We Can Learn from Research and Analysis of Disaster Medical Situations

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Much can be learned from the study of the medical impact of and the medical responses to a multicasualty incident (MCI) or disaster. However, since there never will be a randomized, controlled, prospective MCI or disaster, it is not realistic to use experimental research designs for the study of these situations. Thus, in this form of evaluation research, it will not be possible to prove cause:effect relationships using inferential statistics. Therefore, instead of using the "standard" quantitative, experimental studies qualitative research techniques must be used to study such events.

Well-constructed, qualitative and evaluation research techniques often have excellent external validity (generalizability). Furthermore the validity increases as findings are duplicated from additional studies. The validity increases further when the techniques used as well as the methods used for reporting the results of such studies are standardized.

The purpose of performing such studies is not the proof or rejection of a hypothesis, but instead, the development of a knowledge base that leads to the formation of hypotheses. These theories become substantiated or rejected by subsequent, similar studies. Thus, in such studies, the hypotheses evolved are not "proven", but are

substantiated through multiple studies.

The scope of such studies may be quite broad or may focus on a very limited, tiny aspect of a medical response. For example, the overall public health consequences of an earthquake may be studied, or the study may be limited to the changes in the incidence of malaria following the event. Similarly, the use of such procedures often fosters the development of similar strategies for specific aspects of quite dissimilar events.

Regardless of the scope of the studies, the procedures available for use essentially are the same. The methods available form the mainstay of research in the social sciences. The qualitative techniques include data gathering from after-action reports, reports by the media, abstractions from medical records, structured interviews, surveys, and case reports. Often, descriptive statistics are used to identify the magnitude of the problems associated with the responses. Analyses of the data acquired require synthesis of information into theory.

In order to learn from experiences with the aim of improving future medical responses we must become knowledgeable in these processes and be able to apply these techniques to the study of future events. For many of us, this may require a modification of our paradigm of what constitutes valid and useful research.

**Key words:** disasters; epidemiology; evaluation; experimental methods; multicasualty incidents; qualitative methods; quantitative methods; research; responses