based expert systems is ideal for the development of intelligent systems in prehospital and disaster medicine. The two methods complement each other—ANNs perform nonlinear functions, pattern recognition, fault tolerance, and parallel processing, while expert systems involve language processing, formal logic, and rule interpretation.

Methods: The potential of the fuzzy cognitive map as a principal form of knowledge representation in disaster and prehospital planning and control systems will be assessed in this project. In such systems, fuzzy cognitive maps could assume some of the functions currently handled by human experts, ensuring a faster, more consistent response. A proof-of-concept demonstration centered on a selected problem area will be presented as well.

Conclusions: The hybrid combination of ANNs and expert systems will facilitate the automation of various decision support systems in prehospital and disaster medicine, while providing adaptability and real-time functionality.

Keywords: artificial neural networks; decision-making; expert systems; fuzzy cognitive maps; prehospital

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(143) City Expansion, Squatter Settlements, and Policy Implications in Addis Ababa: The Case of Kolfe Keranio Sub-City

M. Melesse
Wonji Catholic Church, Addis Ababa, Ethiopia

Currently, the city of Addis Ababa, Ethiopia, is expanding at a rapid rate. Throughout its history, the city has been undergoing horizontal expansion as the major form of development. Responsibility for this physical expansion has been attributed to legal landowners, land developers, and squatter settlements. This study focuses on the squatter settlements that are found in the sub-city of Kolfe Keranio. The principal objective of the study is to assess the causes and consequences of squatter settlements in light of the unplanned expansion of the built-up region of the city.

The results of the study indicate that the emergence of squatter settlements in the study area is a phenomenon that has been occurring since 1994. High building standards of the legal housing structures, delayed responses, procedural problems of the legal land provision, and high housing rents in the city center were identified by the respondents as the causes of squatting. In addition, less government control of open spaces, the limited capacity of the code enforcement service to control illegal house construction, lack of a comprehensive legal response towards the problem of squatting, and the practice of land sale by land speculators as a means of making profit are other factors that have contributed to the emergence and proliferation of squatter settlements.

Keywords: housing; policy; regulation; squatters; urban expansion

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(144) Team Approach in Foreign Medical System after the Java Earthquake in May 2006

H.R. Naber; A.K. Mostert
Isala Klinieken, Zwolle, The Netherlands

On Saturday morning, 27 May 2006, an earthquake occurred in Java, near Jogjakarta. After the initial chaos triggered by the event, the regional hospitals were overwhelmed with patients. The local medical teams worked 24 hours a day, 7 days a week. On Tuesday, a hospital from The Netherlands received a request to send a relief operating room (OR) team. After internal communication, a well-trained team was formed to work on a daily basis. The team consisted of one orthopedic surgeon, one anesthesiologist, two surgical nurses, one anesthetic nurse, and a recovery nurse. They left for Java the next day. The experiences of this team will be presented and the lessons that were learned for preparation and actual deployment will be discussed.

There was an agreement within the group that the Major Incident Medical Management and Support (MIMMS) principle of command and control, safety, communications, assessment, triage, treatment, and transport (CSCATTT) would be used as a guideline. Lessons learned from the team's experiences included:

1. Help must be provided as asked for by the local staff and support must be provided where needed;
2. The team members must be fully vaccinated a priori (in this case, everyone was);
3. Cordless drills are convenient and safe for routine surgery (easy to use in a sterile way);
4. Walkie talkies are useful communication devices in an unfamiliar environment;
5. Teams must use their own small monitoring systems; and
6. Adequate communication with the home front provides valuable information for relief teams.

Keywords: earthquake; international assistance; medical management; operating team; relief

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(145) Comparative Survey of Iran Disaster Management System Performance for Response to Natural Disasters Based on Directors and Experts Experiences during the Past 15 Years

V. Hossenijenab, A.R. Djalali, B. Abdi Farkoush
Natural Disaster Research Institute, Tehran, Iran

Introduction: Iran is a country that is one of the most vulnerable to natural hazards. In previous years, it has been affected by many disasters. Fifteen years ago, the development of regulations for a disaster management structure in Iran took a scientific and applicable direction. The objective of this study is to present a survey of system performance for response to disasters due to natural hazards.

Methods: After reviewing the related documents, a questionnaire with the purpose to define the state of response to disasters was designed. The questionnaire was distributed to 30 directors and 50 experts of the disaster management system. The most important indicators were type of disaster, the extent of response actions, how the directors were informed, time the response started, direction and command model used, and other related indicators.

Results: The average age of population survey was 37 years and average related work experience was 15 years. Most of surveyed individuals have been working in operational and management fields. The average time for notification of an incident was eight hours, and most were informed from a dis-