action of real accident situations. It also is difficult to represent accident situations with casualties represented by live players, because different traumas and symptoms are nearly impossible to be vividly and correctly simulated. Thus, there is an urgent need to provide easily available and truly interactive methods for large-scale training for both individual members as well as for emergency groups and ensembles.

Interactivity, problem solving, decision-making, immediate evaluation, and feedback are the key elements of a simulation program for training actions for medical emergency care.

There are two totally different applications available to provide adequate training. The first is to construct a simulation training centre with giant computers to create integrated group training sessions or even virtual reality circumstances. The other way is to provide large-scale individual training with software running in a normal PC. The tactics and cooperation at the site of an accident are so multidimensional that it has only been in recent years that the more advanced computer technology has made it possible to create this type of simulation program for PCs. With these programs, it is possible to create challenging scenes with naturally acting casualties having different injuries. Because the program "memorizes" the performance step by step, it can be scored and evaluated. This immediate feedback is essential for learning and progressing successfully to more difficult situations. This individual training later can be completed in much more advanced and technically demanding group sessions. We can expect that interactive training software production will accelerate, and thus, provide modern useful training and testing methods for emergency care.

Key words: computers; emergency care; groups; feedback; individual; interactive; learning; simulations E-mail: matti.mattila@matimed.pp.fi Prehosp Disast Med 2001;16(2):s48.

Municipal Contingency Plans

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During the last century, disaster prevention has become the focus of attention in emergencies administration. Knowing clearly and accurately the possible effects of a disaster, and who commands the responses in case of emergency, can facilitate the civil protection authorities and the general population to develop specific mechanisms to reduce the impact of calamitous events.

Municipal Contingency Plan (MPC) develops community protection actions and includes action organizations, services, people, and resources available to attend to disasters. It also contains specific risk identification, community preparedness, local capabilities for response, risk planning, and establishment of the structure for organization (authorities, agencies, offices, volunteers) to respond at the emergency. Each element knows their respective role what to do, what not to do, and how to participate in a team effort.

The state of Oaxaca is situated in the southeast portion of Mexico and presents a complex geography that makes access to basic emergency services difficult. The state is also at high risk for earthquakes: Of the total number of earthquakes in Mexico, 40% strike in Oaxaca. Additionally, the Tehuantepec Isthmus Region occupies the first matrix point for generating hurricanes.

Today more than ever before, both the urban and rural population in Oaxaca know the effects of disasters. The government and society are now more inclined to promote and practice self-protection and the prevention of the most traumatic consequences.

Development of the proposed MPC forces decisionmakers to plan and execute preventive actions and emergency projects, by developing effective formulas that can improve the stability factors and response mechanisms. Our goal is the generation of organizational schemes based on natural community leadership.

In order to develop prevention strategies, we must facilitate collaborative activities between municipal institutions, like education and health, promoting natural schemes of organization. This organization should be based in the society and not in government offices because if programs are applied by official means, they may have only a shortterm effect. However, if its implementation is developed and adopted by the local community, its effect may be more long-term.

The Civil Protection Office in Oaxaca, has implemented this formula and it is clearly effective. Where the population has been adopted these systems, especially in the hazardous places, they have been able to prevent the most common causes of disasters and promote a culture of prevention.

Key words: collaboration; contingency planning; disaster; municipal; planning; prevention; risk; roles *Prehosp Disast Med 2001*;16(2):s48.

Cardiac Arrest: The Case Against Public Access Defibrillation

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Objective: The aim of this study was to determine the location of out-of-hospital cardiac arrests in Melbourne, Australia, and to determine if public access defibrillation may be of benefit.

Methods: A retrospective case note review of all out-of-hospital cardiac arrests that presented to the Metropolitan Ambulance Service (Melbourne, Australia) for 1997, was performed with the use of the Utstein Criteria.

Results: 1,064 victims of out-of-hospital cardiac arrests were identified: (1) age, 66.5 \pm 15.3 years; (2) gender, 64% male; (3) response time, 9.1 \pm 4.2 minutes; (4) witnessed, 57.5%; (5) documented call to 000, 87.7%; (6) bystander CPR, 34.7%; and (7) location: private home, 915/1,064 (93.7%), public place, 62/1,064 (5.8%).

Conclusions: These results indicate that out-of-hospital car-