in 15% of the hospitals, although 83% reported that it would be impossible to provide meals for patients and staff with no main gas supply.

Conclusions: No hospital fulfilled the criteria for adequate disaster preparedness based on the categories queried. Areas of greatest concern requiring improvement were lack of an external disaster plan and self-sufficiency with backup energy, water, and food supplies. It is recommended that hospitals in Japan be required to develop plans for emergency operations in case of an external disaster. This should be linked with hospital accreditation as is done currently for internal disaster plans.

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## The Development of Medical Didactic Activities for a Better Emergency Organization: The Contribution of Medical Staff in the VII Unit-Sanitaria Ligure "Del Savonese"

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The care of casualties or those who need medical care is a moral and civil duty. An up-to-date and developed society must have an efficient organization that is able to carry out rescue activities with all available human and technological resources. In Italy, rescue usually is carried out by the Red Cross and voluntary associations with personnel who often are not well-trained

The practical organization and didactic activities rely on local initiatives. The USL, in cooperation with the local fire department, the Rotary Club, and an organization of doctors on duty in the First-Aid Department, organized a theoretical and practical qualification course in advanced rescue techniques to be used during natural catastrophes and major emergencies. Several phases, lasting 15 days, took place at the local fire department barracks. This organization model for emergency services is of interest to both regional and non-regional hospitals, and it has been contacted by other emergency teams.

A proposition was detailed for collaboration between other links of the "rescue chain" (fire department, Red Cross, police departments, etc.) aimed at improving the adequacy of organization and didactic programs. Since continuous training is the basis for being able to reach real efficiency and efficacy among rescue operations, these simulations of catastrophes have been carried out, and they have involved all components of the rescue chain.

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## Analysis of Interventions in Prehospital Care by Standing Orders versus On-Line Medical Command

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**Objective:** The aim of this study was to compare the patient care measures performed by paramedics according to standing orders, versus measures ordered by on-line medical command, to determine the utility of medical command orders.

**Design:** Prospective identification of patient care measures performed as part of a prehospital quality assurance program.

**Setting:** An urban paramedic service in the northeast United States with on-line medical command from three local hospitals.

**Participants:** All paramedic transport reports (515) for October–December 1992.

**Interventions:** All patient care interventions, case-by-case, were recorded and classified if performed in response to standing orders [indirect] or on-line [direct] command orders.

Results: On-line [direct] command gave orders in 79/515 (15.3%) cases; in four of these cases, the orders were erroneous. Paramedics performed 1301/1399 (92.9%) of the total interventions using standing orders. Eleven of 79 command order cases were for additional doses of epinephrine or atropine in cardiac arrest cases, and 26/79 were for interventions already mandated by standing orders. In only 42 cases (8.2%), medical command ordered a potentially beneficial intervention not specified by standing orders or not performed by the paramedic.

**Conclusion:** On-line [direct] medical command gave orders in only 15% of cases in a standing orders system, but in almost half of these cases, command orders only reiterated the standing orders. More selective and reduced use of on-line command could be performed in this system with no change in the types or numbers of patient care interventions performed.