

missions in which there is an extreme risk for mass casualties (e.g., situations such as battles, disasters, and emergencies). In the present work, a Disaster and Emergency ISE is analyzed as a multidimensional problem. The dimensions of the environment include: (1) disciplines; (2) processes; (3) means; (4) players; (5) time; and (6) resources. Special attention is focused on the content and quality of information, standards, and formats of presentations that are aimed at knowledge enhancement rather than just data exchange. The authors assess time as a crucial parameter that should be taken into account within ISE.

This approach has been the basis of the Supercourse, a library that contains >2,800 free lectures on disaster prevention issues. With the distribution of hurricane lectures in 2005, the use of the Supercourse demonstrated that “Just-In-Time” knowledge can be distributed rapidly and virtually free-of-charge throughout the secure network.

The next step to satisfy time requirements of a modern ISE, is to organize the Supercourse into fast reaction units. The non-commercial scope of the Supercourse is based on the fact that there are numerous experts that are eager to share their knowledge and while the actors on the battlefield lack of time to solve commercial problems. This approach also has been implemented in the Italian Disaster Data Base (IDDB)—a collection of information shared by government institutions, professionals from different fields, non-governmental organizations, and volunteers. The Supercourse and IDDB experience potentially could serve as a model for ISE construction.

**Keywords:** data sharing; disasters; emergencies; Information Sharing Environment; network

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### (185) A Disaster Exercise Is a Useful Environment to Test Scientific Instruments for Disaster Research

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**Introduction:** Evaluation of medical care during disasters is difficult. During a national disaster exercise (DE), three research instruments (RI) were tested.

**Objectives:** The main objectives were to investigate the possibility to use a DE as a scientific instrument and to evaluate the DE. Part 1 tested an existing quantitative evaluation tool (ET) of the Health Incident Management System (HIMS). Part 2 tested a triage registration format (TRF) for victim distribution planning (VDP). Part 3 assessed the Casualty Distribution Plan (CDP) and hospital treatment capability (HTC).

**Method:** The ET was translated, adapted to the national structure, and presented as a questionnaire using a 5-point Likert scale. Data on VDP were gathered from registrations of Mobile Medical Teams, casualty collection points, ambulances, trauma center (TC), and mock victims. Registrations from ambulance services and TC were used for CDP and HTC.

**Results:** Of all participants, 90% (n = 217) could be contacted about the HIMS; >95% of all questions were answered. The effects of the HIMS were noted as positive

except for multidisciplinary cooperation. The VDP of 52 (51%) patients who reached the TC could be traced. Data from triage charts (87%), ambulance charts (57%), TC charts (100%), and MV forms (95%) were retrieved. The TRF could be used to evaluate patient flow; triage decisions could not be evaluated. At one location, patient flow exceeded the established HTC during one hour.

**Conclusions:** Existing and new disaster RI can be tested during a DE. Improvements, like validation of the RI, have been identified and can be tested during future DE.

**Keywords:** disaster exercise; disaster research; evaluation tool; Health Incident Management System; research instrument

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### (187) Main Factors in Estimating Travel Time after Disasters

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Traveling after events caused by manmade or naturally occurring hazards is an important factor to consider when managing such events. Naturally-caused events such as earthquakes, tsunamis, and floods can impact transportation networks and human behaviors.

By recognizing main factors that can impact the performance of a transportation network, a conceptual method for estimating travel time during events is presented. The methods of this research include observing the human behaviors and physical damage after disasters and classifying them into different groups. By using this method, the main problems after the occurrence of events are recognized, and the associated time delay is evaluated. The results of this research provide a procedure for estimating the travel time for emergency and other types of vehicles after disasters.

**Keywords:** disaster; event; preparedness; transportation; travel time

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### (188) Primary Healthcare System in Small Islands

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**Introduction:** The primary healthcare system has a crucial role in communities located on small islands and archipelagos stricken by an emergency or disaster. The main purpose of the study was to evaluate the level of emergency preparedness of the primary care system in the Archipelago of the Azores in Portugal.

**Methods:** A questionnaire was distributed to all 16 Primary Health Care Centres (PHCCs) on the Archipelago: (1) 12 Type 1 PHCCs in those that provide emergency care and inpatient admission services; and (2) four Type 2 PHCCs, those that do not provide in-patient services. The survey responses of Type 1 PHCCs were grouped into six main groups based on criteria and analyzed in “benchmarking categories”. Scores for each group were proposed. A final score also was established for